

# SEARCH REQUEST FORM

2-359

Requestor's Name: E. White Serial Number: 09/101,341  
Date: 2/19/99 Phone: 308-4621 Art Unit: 1623  
7A17

## Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

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Date completed: 02-18-99

Searcher: Beverly @ 4994

Terminal time: 69

Elapsed time: \_\_\_\_\_

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Total time: 81

Number of Searches: \_\_\_\_\_

Number of Databases: 1

Search Site	Vendors
<input type="checkbox"/> STIC	<input checked="" type="checkbox"/> IG
<input type="checkbox"/> CM-1	<input type="checkbox"/> STN
<input type="checkbox"/> Pre-S	<input type="checkbox"/> Dialog
Type of Search	
<input type="checkbox"/> N.A. Sequence	<input type="checkbox"/> APS
<input type="checkbox"/> A.A. Sequence	<input type="checkbox"/> Geninfo
<input type="checkbox"/> Structure	<input type="checkbox"/> SDC
<input type="checkbox"/> Bibliographic	<input type="checkbox"/> DARC/Questel
	<input type="checkbox"/> Other

Everett White

09/101,341

February 9, 1999

308-4621

1623  
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Please search the method of producing polysaccharide fibres of claims 1-12, claims to the polysaccharide fibre of claims 13 and 14, and claims to an absorbent structure in an absorbent article of claim 15. A copy of the claims is attached hereto. A copy of the cover sheet comprising the inventor name(s) is also attached.

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White, E.  
09/101341

09/101341

FILE 'REGISTRY' ENTERED AT 15:05:23 ON 18 FEB 1999

E KETONE/CN 5  
E KETONES/CN 5  
E METHANOL/CN 5  
L1 4 SEA ABB=ON PLU=ON (METHANOL/CN OR "METHANOL (13CD3OH)"/CN OR "METHANOL (CD3OH)"/CN OR "METHANOL (CH3OD)"/CN)  
E ETHANOL/CN  
L2 1 SEA ABB=ON PLU=ON ETHANOL/CN  
E ISOPROPANOL/CN  
L3 1 SEA ABB=ON PLU=ON ISOPROPANOL/CN  
E ACETONE/CN  
L4 1 SEA ABB=ON PLU=ON ACETONE/CN  
L5 7 SEA ABB=ON PLU=ON L1 OR L2 OR L3 OR L4  
E POLYELECTROLYTE/CN 5  
E POLYVINYLMINE/CN  
E POLYBRENE/CN  
L6 1 SEA ABB=ON PLU=ON POLYBRENE/CN  
E HEXADIMETHRINBROMIDE/CN  
L7 1 SEA ABB=ON PLU=ON "HEXDIMETHRINE BROMIDE"/CN  
L8 1 SEA ABB=ON PLU=ON L6 OR L7

FILE 'CAPLUS' ENTERED AT 15:07:16 ON 18 FEB 1999

L9 11935 SEA ABB=ON PLU=ON (POLYSACCHARIDE OR POLY SACCHARIDE) (5  
A) (FIBRE OR FIBER) OR DIAPER OR SANITARY NAPKIN OR  
INCONTINENC? (3A) (GUARD OR PAD OR PADDING) OR ABSORB? (3A) (ARTICLE OR MATERIAL)  
L10 2166 SEA ABB=ON PLU=ON L9(10A) (MANUF? OR PROD? OR PREP?)  
L11 250 SEA ABB=ON PLU=ON L10 AND (L5 OR ALCOHOL OR KETONE OR  
METHANOL OR ETHANOL OR ISOPROPANOL OR (I OR ISO) (W) (PR  
OR PROPANOL) OR ACETONE)  
L12 3 SEA ABB=ON PLU=ON L11 AND (L8 OR POLYELECTROLYTE OR  
POLY(W) (ELECTROLYTE OR VINYL AMINE OR VINYLAMINE OR  
BRENE) OR HEXADIMETHRINBROMIDE OR (HEXDIMETHRIN? OR  
HEXA(W) (DIMETHRIN? OR DI METHRIN?)) (W) BROMIDE OR  
HEXADI(W) (METHRINBROMIDE OR METHRINEBROMIDE OR METHRIN?  
BROMIDE))  
L13 47 SEA ABB=ON PLU=ON L11 AND (POLYVINYLMINE OR SALT OR  
POLYBRENE)  
L14 48 SEA ABB=ON PLU=ON L12 OR L13  
  
L14 ANSWER 1 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1998:599363 CAPLUS  
DN 129:218355  
TI Process for producing polysaccharides and their use as  
absorbent materials  
IN Cottrell, Ian William; Goswami, Animesh; Chowdhary, Manjit Singh  
PA Rhodia Inc., USA  
SO U.S., 9 pp. Cont. of U. S. Ser. No. 418,334, abandoned.  
CODEN: USXXAM

- key terms

Searcher : Shears 308-4994

09/101341

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5801116	A	19980901	US 97-880113	19970620
PRAI	US 95-418334		19950407		

AB A solid compn. of matter comprising one or more polysaccharides which has a coarse particle size is provided. The compn. demonstrates absorbent properties and is useful in absorbent articles of manuf. Also provided is a method for prep. the compns.

IT 64-17-5, Ethanol, uses 67-56-1,

Methanol, uses

RL: NUU (Nonbiological use, unclassified); TEM (Technical or

engineered material use); USES (Uses)

(process for producing polysaccharides and their use as  
absorbent materials)

L14 ANSWER 2 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1998:488296 CAPLUS

DN 129:176897

TI Solutions for imparting stimulus-responsive opening properties to fibers for manufacture of nonwoven fabrics openable in alkali solutions

IN Omura, Isao; Nakada, Yoichi

PA Pigeon Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10195770	A2	19980728	JP 96-345228	19961225

AB The title solns. are prep'd. by dissolving or dispersing mixts. contg. cationic polymers and anionic polymers in aq. solns. The solns. are useful for manuf. of sanitary products, disposable diapers, and wiping cloths flushable in toilets (no data). A nonwoven fabric comprising rayon 90, poly(vinyl alc.) fibers 6, and Vynylon fibers 4% was coated with an aq. soln. contg. 0.5% Hiviswako 103 (carboxyvinyl polymer) and 0.5% Leogard GP (cationized cellulose) and dried to give a nonwoven fabric with resin content 0.02 g/100 cm<sup>2</sup>. Fiber dispersibility and opening properties were good on stirring the nonwoven fabric in an aq. soln. (pH 9.0) for 30 s.

L14 ANSWER 3 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1998:28455 CAPLUS

Searcher : Shears 308-4994

09/101341

DN 128:103364  
TI Low-temperature sealable fibers and water-resistant nonwoven fabrics made from them  
IN Kojima, Mitsuru; Kataoka, Yukinori; Suzuki, Masayasu  
PA Chisso Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10001875	A2	19980106	JP 96-291180	19961014
	CN 1168424	A	19971224	CN 97-113014	19970416

PRAI JP 96-119731 19960417  
JP 96-291180 19961014

AB The fibers with good bonding processability, useful for manuf. of nonwoven webs particularly for use in disposable diaper, sanitary napkin, etc., are biconstituent composite fibers with polypropylene core and olefin copolymer or terpolymer sheath, and have been oiled with a mixt. of (A) C8-18 alkylsulfonic acid Na or/and Li-salts, 5-15, (B) polyhydric alc. esters or/and fatty acid alkanolamides, 5-45, and (C) dibasic carboxylic acid esters or/and polyethylene glycol esters, 40-90%. Thus, oiling a composite fiber having a polypropylene core and a butene-propylene copolymer sheath with a mixt. of Na stearylsulfonate 10, sorbitan monolaurate 9, dioctyl phthalate 43 and polyethylene glycol distearate 38 parts, stretching on heated roll, crimping, drying and cutting gave short fibers. Nonwoven web made from the short fibers had good heat sealing properties and water resistance.

L14 ANSWER 4 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:772468 CAPLUS  
DN 128:76538  
TI Composite fibers with high saline absorption capacity and their manufacture  
IN Ogura, Kuniyoshi  
PA Toyobo Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09310228	A2	19971202	JP 96-127203	19960522

AB The title fibers esp. useful for absorbents such as that for horticultural moisture retainer, disposable diaper,

Searcher : Shears 308-4994

09/101341

sanitary napkin, etc., are manufd. from  
(A) crosslinked products of copolymers contg. 10-99%  
amphoteric vinyl monomers, e.g., betaine, and (B) >1 other  
reinforced polymers. Thus, composite fibers spun from (A) a 99:1  
copolymer of N,N-dimethyl-N-(3-acrylamidopropyl)-N-  
(carboxymethyl)ammonium inner salt and  
N-methylolacrylamide as the sheath component and (B) 20% succinic  
acid-crosslinked poly(vinyl alc.) as the core component  
had tensile strength 0.8 g/denier, elongation 54%, and absorption  
rate 108, 33 and 38% for pure water, 0.9% NaCl aq. soln. and  
man-made saline, resp.

L14 ANSWER 5 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:719610 CAPLUS  
DN 128:55414  
TI Ink-jet printing sheet for transparency preparation  
IN Malhotra, Shadi L.; Naik, Kirit N.; MacKinnon, David N.; Jones,  
Arthur Y.  
PA Xerox Corp., USA  
SO U.S., 20 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5683793	A	19971104	US 96-657134	19960603

AB The title printing sheet comprises a supporting substrate, thereover  
a first coating layer comprised of an ink-absorbing layer and a  
biocide and a second ink-spreading coating layer comprised of a  
hydrophilic vinyl binder, a dye mordant, a filler, an optional light  
fastness-inducing agent, and an ink spot size-increasing agent  
selected from the group consisting of hydroxy acids, amino acids,  
and polycarboxyl compds., wherein the first coating layer is in  
contact with the substrate and is situated between the substrate and  
the second ink coating layer and the transparency prep'd. possesses a  
haze value of from about 0.5 to about 10 and a light fastness value  
of from about 95 to about 98.

L14 ANSWER 6 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:696908 CAPLUS  
DN 127:332762  
TI Nonwoven webs for use in hygienic products and treatment for  
improving the carding processability and reducing stickiness under  
wet condition of synthetic fibers for their manufacture  
IN Takahashi, Kazuhide; Oota, Sumio; Higashiguchi, Teruo; Komeda,  
Haruhiko; Kita, Setsuo  
PA Matsumoto Yushi-Seiyaku Co., Ltd., Japan; Takahashi, Kazuhide; Oota,  
Sumio; Higashiguchi, Teruo; Komeda, Haruhiko; Kita, Setsuo  
Searcher : Shears 308-4994

09/101341

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9739175	A1	19971023	WO 97-JP1312	19970416
	W:	CN, DE, JP, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			

PRAI JP 96-93935 19960416

AB The nonwoven webs particularly useful as cover sheets of disposable diaper and sanitary napkin are prep'd. from synthetic hydrophobic fibers treated with an antistatic agent contg. alkylene oxide adducts of higher alcs. or other active H-contg. compds., and N-contg. compds. selected from alkylene oxide adducts of higher fatty acid amine amides or higher fatty acid alkanolamides. Thus, a such treatment was obtained from a mixt. of an ethylene oxide-propylene oxide block copolymer C30 alkyl ether 20, behenic acid diethylenetriamine diamide-ethylene oxide adduct 25, diethanolamine stearamide 35, polyethylene oxide lauryl phosphate K salt 15 and Na alkanesulfonate 5 parts.

L14 ANSWER 7 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1997:568182 CAPLUS

DN 127:207229

TI Wet-spun pectin fibers and their manufacture and use in wound dressings

IN Gerrish, Timothy C.; Luzio, Gary A.

PA Hercules Incorporated, USA

SO PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9730093	A1	19970821	WO 97-US2983	19970214
	W:	AL, AU, AZ, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL, JP, KG, KR, KZ, LK, LV, MD, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SG, SI, SK, TJ, TM, TR, UA			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
	US 5688923	A	19971118	US 96-602166	19960215
	AU 9719762	A1	19970902	AU 97-19762	19970214
	EP 880547	A1	19981202	EP 97-907869	19970214
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT,			

Searcher : Shears 308-4994

09/101341

IE, FI

PRAI US 96-602166 19960215

WO 97-US2983 19970214

AB A polyvalent cation-crosslinked pectin fiber compn. is composed of a calcium sensitive low methoxyl pectin with a degree of esterification (DE) of less than 15% or calcium sensitive amidated pectin having a DE of less than 50 % where the pectin is polyvalent cation crosslinkable and has an av. mol. wt. having an upper limit of 200,000 and a lower limit of 5000. This pectin is useful in making wound dressings for topical applications. Thus, a filtered aq. soln. of pectin was pumped through a syringe into a bath contg. 30% CaCl<sub>2</sub> to give a fiber having tensile strength of 1.1 kg/mm<sup>2</sup>, which was recovered, rinsed with water and iso-Pr alc., and dried. A soft white fiber was obtained having diam. of .apprx.44 .mu.m and tensile strength of 28.0 kg/mm<sup>2</sup>.

L14 ANSWER 8 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1997:552656 CAPLUS

DN 127:163061

TI Manufacture of polysaccharide fibers  
as absorbent materials and  
polysaccharide fibers and absorbent  
articles therefrom

IN Malmgren, Kent; Widberg, Bengt

PA SCA Molnlycke Ab, Swed.; Malmgren, Kent; Widberg, Bengt

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9725463	A1	19970717	WO 96-SE1698	19961218
	W:	AU, CZ, JP, KR, MX, PL, RU, SK, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
	SE 9600087	A	19970711	SE 96-87	19960110
	SE 505873	C2	19971020		
	AU 9713233	A1	19970801	AU 97-13233	19961218

PRAI SE 96-87 19960110

WO 96-SE1698 19961218

AB The fibers are prep'd. by spinning solns. contg. polysaccharides in a bath contg. water-miscible org. solvents and crosslinking agents. The fibers are useful for diapers and sanitary napkins (no data). A soln. contg. CM-cellulose was spun into a bath contg. 95 vol% EtOH, 5 vol.% H<sub>2</sub>O, and 3 g/L AlCl<sub>3</sub>. 6H<sub>2</sub>O, drawn in the bath, and washed with EtOH to give fibers exhibiting total synthetic urine absorption amt. 29.9 g/g by a specified test.

IT 64-17-5, Ethanol, uses 67-56-1,

Searcher : Shears 308-4994

09/101341

Methanol, uses 67-63-0, Isopropanol,  
uses 67-64-1, 2-Propanone, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(solvent; manuf. of polysaccharide  
fibers as absorbent materials and  
articles therefrom)

L14 ANSWER 9 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:465113 CAPLUS  
DN 127:82797  
TI Liquid absorbent material and process for  
preparing the same  
IN Sameshima, Tadanori; Miura, Teruo; Miyata, Kiyotaka; Yagura, Eiji  
PA Oji Paper Co., Ltd., Japan; Sameshima, Tadanori; Miura, Teruo;  
Miyata, Kiyotaka; Yagura, Eiji  
SO PCT Int. Appl., 22 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9720090	A1	19970605	WO 96-JP2545	19960906
	W: CA, CN, KR, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 09158024	A2	19970617	JP 95-332513	19951129
	CA 2211876	AA	19970605	CA 96-2211876	19960906
	EP 806508	A1	19971112	EP 96-929550	19960906
	R: DE, FR, GB, IT				
	CN 1179799	A	19980422	CN 96-192833	19960906
PRAI	JP 95-332513	19951129			
	WO 96-JP2545	19960906			
AB	The title material has excellent swellability and retention of a liq. absorbed in a perpendicular direction, and is suitable for mass prodn. at reduced cost. This material comprises natural cellulosic and/or synthetic fibers, a heat fusible material, and a thickening agent and is produced by mixing and disintegrating the above starting materials in air to form a mat, heating the mat to or above the m.p. of the hot fusible material, and compressing the mat by means of a press roll to fix the thickening agent in the web. The material is useful for ink-jet printer parts.				
L14	ANSWER 10 OF 48 CAPLUS COPYRIGHT 1999 ACS				
AN	1997:403184 CAPLUS				
DN	127:18802				
TI	Water absorbent resin, absorbent material, and manufacture thereof				
IN	Ishizaki, Kunihiko; Obara, Hisanobu; Kitayama, Toshimasa; Motono, Searcher : Shears 308-4994				

09/101341

PA Yoshihiro; Harada, Nobuyuki  
Nippon Shokubai Co., Ltd., Japan; Ishizaki, Kunihiko; Obara,  
Hisanobu; Kitayama, Toshimasa; Motono, Yoshihiro; Harada, Nobuyuki  
SO PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9716492	A1	19970509	WO 96-JP3191	19961031
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 10120818	A2	19980512	JP 96-270917	19961014
	JP 09183856	A2	19970715	JP 96-287124	19961029
	EP 802238	A1	19971022	EP 96-935509	19961031
	R: DE, FR, GB, IT				
PRAI	JP 95-286266		19951102		
	JP 96-270917		19961014		
	WO 96-JP3191		19961031		

AB A sheetlike absorbent material is produced by reducing the water content of a hydrogel of a hydrophilic crosslinked polymer under pressing (milling) and feeding. A gel compn. comprising, for example, a hydrogel contains a crosslinked poly(meth)acrylic acid (salt), glycerol (polyhydric alc.), and polyester fibers (molding assistant) onto a dryer drum on the upstream side of a press roller, whereby the gel compn. is pressed (milled) and heated by the press roller to give a sheet with at least one surface thereof smoothed. The absorbent material produced by the above process is excellent particularly in absorption characteristics such as absorption speed and absorption factor under pressure and shape retention. An absorbent with basis wt. 490 g/m<sup>2</sup>, water content 7.5%, water absorption 25.2 g/g, 10-fold water absorption time 68 s, and Cantilever softness 750 mg was prep'd. from finely divided acrylic acid-Na acrylate copolymer crosslinked by trimethylolpropane triacrylate, glycerin, surface crosslinker ethylene glycol diglycidyl ether, and PET fiber.

L14 ANSWER 11 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1997:218375 CAPLUS

DN 126:213319

TI Liquid distribution layer for absorbent articles and manufacture of the layer and the articles

IN McDowall, Debra Jean; Levy, Ruth Lisa; Sawyer, Lawrence Howell;  
Paul, Susan Carol; Shultz, Jay Sheldon; Wright, Robert David;  
Varona, Eugenio Go

PA Kimberley-Clark Corporation., USA

Searcher : Shears 308-4994

09/101341

SO S. African, 36 pp.

CODEN: SFXXAB

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ZA 9501878	A	19951211	ZA 95-1878	19950307
PRAI	US 94-220892		19940331		

AB A liq. distribution layer for absorbent articles comprising a nonwoven web of substantially continuous microfibers, wherein said microfibers are substantially aligned along one planar dimension of said web and said microfibers comprise a fiber-forming polymer selected from the group consisting of hydrophilically modified polymers (e.g. alkenylsuccinamide salt-treated meltblown nonwoven polypropylene web) and hydrophilic polymers. This layer exhibits good dimensional stability and ability to quickly transfer incoming liqs. to remote areas of the absorbent material of the articles.

L14 ANSWER 12 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1996:273669 CAPLUS

DN 124:319955

TI Manufacture of water-absorbing cellulosic materials

IN Ren, Kumiko; Tajiri, Kozo; Tsukamoto, Haruo

PA Shinoji Seishi Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08041103	A2	19960213	JP 94-174174	19940726

AB The title materials, useful for disposable diapers, agricultural materials, etc., showing improved absorbance of aq. salts and gel strength, are manufd. from H<sub>2</sub>O-insol. crosslinked acid-type cellulose derivs. by dispersing in H<sub>2</sub>O, neutralizing by alkalis, removing H<sub>2</sub>O from the resulting gels of swelling degree (D) 3-30 g/g, converting carboxylic acids into salts by addn. of alkali in H<sub>2</sub>O-compatible org. solvents, isolating the gels from solvents, removing H<sub>2</sub>O by substitution with the org. solvents, and drying. Thus, epichlorohydrin-crosslinked CM-cellulose was treated by aq. NaOH and the resulting gel of D 28 g/g was treated by NaOH and MeOH to give title material showing good absorbance of artificial urine.

IT 64-17-5, Ethanol, uses 67-56-1,

Methanol, uses

Searcher : Shears 308-4994

09/101341

RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(solvent; manuf. of water-absorbing  
crosslinked cellulosic materials by converting  
carboxylic groups to salts)

L14 ANSWER 13 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1995:886109 CAPLUS

DN 123:296673

TI Flushable compositions

IN Yeo, Richard Swee-Chye

PA Kimberly-Clark Corp., USA

SO Brit. UK Pat. Appl., 65 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2284820	A1	19950621	GB 94-25378	19941215
	GB 2284820	B2	19980415		
	CA 2128483	AA	19950617	CA 94-2128483	19940720
	WO 9516474	A1	19950622	WO 94-US14034	19941206
	W:	AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN			
	RW:	KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9513363	A1	19950703	AU 95-13363	19941206
	AU 687968	B2	19980305		
	DE 4499925	T	19961219	DE 94-4499925	19941206
	CN 1142777	A	19970212	CN 94-195001	19941206
	BR 9408331	A	19970819	BR 94-8331	19941206
	ZA 9409979	A	19950822	ZA 94-9979	19941214

PRAI US 93-168807 19931216

WO 94-US14034 19941206

AB Flushable compns. and products, such as personal hygiene articles, medical, hospital and surgical supplies, and household wipes and packaging material, that have sufficient wet tensile strength for their intended use, particularly prolonged or extended use, in the presence of body waste fluids, which disintegrate and disperse in the presence of ordinary tap water so as to be flushable in a conventional toilet and disposable in municipal or private sewage systems without obstructing or clogging the toilet or sewage system, comprise a thermoreversible polymer and a salt. Klucel was combined with 1.2% by wt. Na<sub>2</sub>HPO<sub>4</sub> and mixed in an aq. soln. used to sat. a non-woven fabric, which subsequently is dried to remove the water. Alternatively, the polymer and salt may be

Searcher : Shears 308-4994

09/101341

mixed and heated to form a water-free compn. that can be spun or extruded to form the flushable materials such as fibers, films, and foams. This flushable material undergoes phase change at .apprx.25.degree..

L14 ANSWER 14 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1995:874722 CAPLUS  
DN 123:266226  
TI Absorptive composition containing microfibers for sanitary products  
IN Chen, Franklin M. C.  
PA Kimberly-Clark Corp., USA  
SO Ger. Offen., 15 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4447152	A1	19950706	DE 94-4447152	19941229
US 5436066	A	19950725	US 93-176624	19931230
CA 2138197	AA	19950701	CA 94-2138197	19941215
JP 07216706	A2	19950815	JP 94-325975	19941227
FR 2714608	A1	19950707	FR 94-15842	19941229

PRAI US 93-176624 19931230  
AB An absorptive compn. contg. 80-<100 wt.% hydrogel-forming polymer and >0-20 wt.% microfibers (surface area 10-25 m<sup>2</sup>/g, static charge -30 to -300 V, length:diam. ratio .gtoreq.50) shows a capillary force .gtoreq.50% greater than that of a similar product without microfibers, and is useful in prepn. of products for absorption of body fluids, e.g. disposable diapers. Thus, Na polyacrylate 3800, cellulose acetate fibers (diam. 0.5-5 .mu.m, length 20-200 .mu.m, sp. surface area 20 m<sup>2</sup>/g) 200, and Carbowax 8000 (wetting agent) 45 g were mixed in a fluidized bed at 60.degree..

L14 ANSWER 15 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1995:780450 CAPLUS  
DN 123:179574  
TI Absorbent composition including a magnetically-responsive material  
IN Chen, Franklin M. C.  
PA Kimberly-Clark Corp., USA  
SO PCT Int. Appl., 35 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9516472	A1	19950622	WO 94-US14033	19941206

Searcher : Shears 308-4994

09/101341

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI,  
GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG,  
MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT,  
UA, UZ, VN

RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,  
LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,  
NE, SN, TD, TG

US 5492754	A	19960220	US 93-168806	19931215
CA 2121514	AA	19950616	CA 94-2121514	19940418
AU 9513362	A1	19950703	AU 95-13362	19941206

PRAI US 93-168806 19931215  
WO 94-US14033 19941206

AB Disclosed is an absorbent compn. including a hydrogel-forming polymeric material and a magnetically-responsive material; disposable absorbent products, including the absorbent compn., intended for the absorption of body fluids; and a method for incorporating the absorbent compn. into disposable absorbent products.

L14 ANSWER 16 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1995:512154 CAPLUS

DN 123:173049

TI Super absorbent materials prepared

from lignocellulosic materials by phosphorylation. VII.

Characteristics of water absorbencies and alkaline treatments

AU Saito, Naoto; Aoyama, Masakazu; Shimizu, Yuichi; Takai, Mitsuo;  
Hayashi, Jisuke

CS Hokkaido Forest Product Res. Inst., Asahikawa, 071-01, Japan

SO Mokuzai Gakkaishi (1995), 41(2), 179-85

CODEN: MKZGA7; ISSN: 0021-4795

DT Journal

LA Japanese

AB Ionic influences and ionic concns., as well as the mixing ratios of org. and aq. solvents on the water absorbencies of phosphorylated products prep'd. from lignocellulosic materials, were investigated. The purpose was to explore further the swelling characteristics of the products after being transformed into Na salt form by alk. treatments. Water absorbencies of products decreased by the addns. of ions and aq. ethanol or acetone solvent. Thus it was shown to be affected by the molar concn. of ions in the soln. A tervalent ion was similar to a phosphate for reducing gel vol. due to crosslinking. The product showed the existence of a transition point of the vol.-phase in an aq. soln. of 56% acetone, and shrank considerably at more than this mixing ratio. It was concluded that the electrolytic dissocn. of phosphate groups brings about the absorption of water. A phosphorylated product immersed in an ethanol-water (3:1 vol./vol.) soln. contg. 0.75% NaOH at 100.degree. had great absorbency (110 g H<sub>2</sub>O/g) after freeze-drying. It is presumed that

Searcher : Shears 308-4994

09/101341

the introduction of sodium, at more than two times the molar ratio to phosphorus, into the product by the alk. treatment in an aq. ethanol soln. inhibits hydrogen bonding during the drying process. The product was identical to cellulose I in regard to cryst. structure. These results indicate that Na-substituted phosphate works as a water-attracting group, and the alkali-treated material becomes hydrogel when hydrous microfibrils are dispersed in water.

L14 ANSWER 17 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1995:452245 CAPLUS

DN 122:197069

TI Binder compositions and web materials formed thereby

IN Isaac, Robert Lewis; Cohen, Bernard

PA Kimberly-Clark Corp., USA

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 639381	A1	19950222	EP 94-111421	19940721
	R: BE, DE, ES, FR, GB, IT, NL, SE				
	US 5466518	A	19951114	US 93-107490	19930817
	CA 2111173	AA	19950218	CA 93-2111173	19931210
	JP 07070900	A2	19950314	JP 94-185540	19940808
	FR 2709055	B1	19970221	FR 94-9983	19940812
	GB 2281081	A1	19950222	GB 94-16542	19940816
	US 5576364	A	19961119	US 95-446373	19950522

PRAI US 93-107490 19930817

AB The present invention is directed toward a fibrous web having improved strength characteristics which, rapidly disintegrates when subjected to standardized agitation testing in the presence of water. The web includes a plurality of fibers joined together by a binder. The binder makes up 0.20-15% of the dry wt. of the web. The binder is formed from a blend of 10-40% of a water-dispersible polymer; 10-40% of an elastomeric latex emulsion; 20-40% of a xerogellant; and 5-20% of a plasticizing agent. The fibrous web is useful in the formation of disposable diapers and feminine care products which may be flushed down the toilet. For example, wet-laid webs of polyesters were dip satd. in a binder compn. contg. Sanwet IM5000P (as xerogellant), AQ55D (as water-dispersible polymer), Hystretch V-60 (as elastomeric latex), and glycerin (as plasticizing agent) and the resulting webs showed an increase in strength.

L14 ANSWER 18 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1994:633323 CAPLUS

Searcher : Shears 308-4994

09/101341

DN 121:233323  
TI Manufacture of highly water-absorbent cellulosic materials

IN Ren, Kumiko; Tajiri, Kozo; Tsukamoto, Haruo  
PA Shinooji Seishi KK, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06172401	A2	19940621	JP 92-330490	19921210
AB	The title materials with high absorptivity of salt water are manufd. by swelling water-insolubilized cellulose derivs. in (85-35):(15-65) water-org. solvent mixts. (org. solvents are selected from C3-6 monovalent alcs. and C4-7 ketones) at swelling ratio 3-30 g/g, sepg. the resulting gels from the mixt. solns., substituting water in the sepd. gels with water-compatible org. solvents, then drying. Thus, 20 g bleached kraft pulp was immersed in 300 g aq. soln. comprising water 295.42, Sumitex NF 500K (imidazolidone crosslinking agent) 3.33, and Sumitex Accelerator MX (aid) 1.25 g, filtered, pressed to give a pulp sheet, dried and heated with air at 140.degree., stirred with aq. Me <sub>2</sub> CHOH contg. NaOH, and refluxed with CH <sub>2</sub> ClCO <sub>2</sub> Na, to give fibrous crosslinked CMC-Na, 3 g of which was refluxed in 48.8% aq. Me <sub>2</sub> CHOH, treated with Me <sub>2</sub> CHOH, and dried to give a fibrous water-absorbent material showing absorptivity of synthetic urine 72 g/g.				

IT 67-63-0, Isopropanol, uses

RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(solvent; manuf. of highly water-absorbent cellulosic materials)

L14 ANSWER 19 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1994:138518 CAPLUS

DN 120:138518

TI Absorbing material for manufacture of water-absorbent articles

IN Ellers, Berne F.; Appelgren, Curt H.

PA Swed.

SO PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9322048	A1	19931111	WO 93-SE379	19930429
			Searcher :	Shears 308-4994	

09/101341

W: AU, BR, CA, FI, HU, JP, KR, NO, PL, RU, US  
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE

AU 9342755 A1 19931129 AU 93-42755 19930429  
PRAI SE 92-1349 19920429  
WO 93-SE379 19930429

AB The absorbing material comprises polymeric particles which swell and form a gel while absorbing water, where the particles can be fixed to a substrate (e.g., fibers) using a meltable adhesive to form water-absorbing articles such as diapers, sanitary napkins, and packaged seed products for grass or grains.

L14 ANSWER 20 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1994:33758 CAPLUS  
DN 120:33758  
TI Ion-sequestering agents, water-absorbing resins, and method of water absorption  
IN Takahashi, Akira; Yamada, Myuki; Okada, Minoru  
PA Toa Gosei Chem Ind, Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05237377	A2	19930917	JP 92-72862	19920224
AB	The water-absorbing resins contain ion-sequestering agents composed of (A) amphoteric polymers prep'd. from polymerizable inner salts or (B) amphoteric polymers having cationic polymer block and anionic polymer block or mixts. of cationic polymers and anionic polymers. Water-absorbing resins and the ion-sequestering agents are combined for absorption of water. The resins show excellent water absorptivity in aq. electrolyte solns. and hence are useful in disposable diapers, soil water-retention aids, etc. Thus, a mixt. of 1 part com. polyacrylate water absorbent and 0.1 part N,N-dimethyl-N-methacryloxyethyl-N-(3-sulfopropyl)ammonium betaine-N,N'-methylenebisacrylamide copolymer showed absorptivity of 470 g/g for distd. water, 183 g/g for 1% aq. NaCl, 89 g/g for 0.5% aq. CaCl <sub>2</sub> , and 77 g/g for seawater.				

L14 ANSWER 21 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1993:525277 CAPLUS  
DN 119:125277  
TI Manufacture of high absorbent composite with fibrous materials and particulate absorbents  
IN Veith, Michael W.; Abuto, Francis P.; Werner, Edward E.; Wisneski, Anthony J.

Searcher : Shears 308-4994

09/101341

PA Kimberly-Clark Corp., USA

SO Can. Pat. Appl., 34 pp.

CODEN: CPXXEB

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CA 2072454	AA	19930612	CA 92-2072454	19920626

PRAI US 91-805126 19911211

AB An absorbent composite comprises a compressed web contg. a mixt. of cellulosic fiber, a particulate, water-swellable absorbent, and water. The web contains relatively large quantities of particulate absorbent materials, while maintaining an acceptable degree of flexibility. The composites are suitably employed in absorbent products such as diapers and feminine care products (no data). Thus, various amts. of fibrous wood pulp fluff and polyacrylic acid Na salt were air-laid on a single-ply creped tissue, water was sprayed on its surface, and a second tissue was laid on top of the composite. The first tissue was folded to cover the absorbent material and the composites were tested their phys. properties.

L14 ANSWER 22 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1993:480313 CAPLUS

DN 119:80313

TI Method for immobilizing superabsorbent polymer on the surface of clinical materials

IN Erhardt, Kenneth C.; Hopkins, John Baxter, Jr.; Maher, Joanne Christine; McWilliams, David Ralph

PA Hoechst Celanese Corp., USA

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 547474	A1	19930623	EP 92-120884	19921208
EP 547474	B1	19961030		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE			
AT 144716	E	19961115	AT 92-120884	19921208
ES 2093759	T3	19970101	ES 92-120884	19921208
JP 05277363	A2	19931026	JP 92-331551	19921211
US 5419955	A	19950530	US 93-79694	19930617

PRAI US 91-805538 19911211

AB Superabsorbent materials suitable for manufg.  
diapers, surgical dressings, etc., are provided in the form

Searcher : Shears 308-4994

09/101341

of sheets or fibers made from high-melting polymers and having superabsorbent polymer dispersed uniformly throughout. The materials are capable of incorporating large amts. of superabsorbent polymer and so demonstrate substantially improved absorbency and retention properties. The absorbent material is made by e.g. solvating the matrix material in a suitable solvent, mixing particles of superabsorbent polymer into the solvated matrix to form a stable suspension, then cooling and desolvating the stable suspension. Thus, to a dild. cellulose diacetate-acetone dope was added Sanwet IM 1000 at 3 different concns. After mixing and cooling, the mixt. was cold-cast to form a film which was then dried. Absorbency increased with increasing percentage of Sanwet. Blood absorption and retention data are included for materials of the invention.

IT 67-56-1, Methanol, uses 67-64-1,  
Acetone, uses  
RL: USES (Uses)

(clin. fluid absorbent manuf. with)

L14 ANSWER 23 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1993:455828 CAPLUS  
DN 119:55828  
TI Status of certain additional over-the-counter drug category II and III active ingredients  
CS United States Food and Drug Administration, Rockville, MD, 20857,  
USA  
SO Fed. Regist. (1993), 58(88), 27636-44, 10 May 1993  
CODEN: FEREAC; ISSN: 0097-6326  
DT Journal  
LA English  
AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal Food, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.  
IT 64-17-5, Alcohol, biological studies  
67-63-0, 2-Propanol, biological studies 67-64-1,  
Acetone, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(over-the-counter prepns. contg., stds. for)

L14 ANSWER 24 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1992:67280 CAPLUS  
DN 116:67280  
TI Manufacture of artificial skin  
IN Konishi, Atsushi; Koide, Mikio; Osaki, Kenichi; Ikegami, Kazuhito  
PA Terumo Corp., Japan  
SO Jpn. Kokai Tokyo Koho, 13 pp.  
CODEN: JKXXAF

Searcher : Shears 308-4994

09/101341

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03242142	A2	19911029	JP 90-39365	19900220
AB	An artificial skin useful in treatment of wound, burn, ulcer, etc., is prep'd. which consists of (1) a wound covering layer, (2) a layer of gel-forming substance coated with water-repellent, and (3) an outer layer that controls water permeation; these layers are laminated in that order. The wound covering layer may be prep'd. with a collagen fiber-denatured collagen matrix, collagen fiber-mucopolysaccharide matrix, or collagen fiber-alginic acid matrix. The gel-forming substance includes derivs. of CMC, alginic, hyaluronates acrylic polymers, etc., and the water repellent is silicone, polyurethane, styrene-butadiene-styrene block copolymer, etc. The layer (3) is made of silicone elastomer or polyurethane elastomer. The artificial skin has an adequate water permeation, accelerates skin regeneration, and prevents bacterial infections.				

L14 ANSWER 25 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1991:657000 CAPLUS

DN 115:257000

TI Preparation of water-soluble, salt-sensitive polymers

IN Komatsu, Masanori; Iida, Yasuo

PA Lion Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03174417	A2	19910729	JP 90-178826	19900706
	US 5317063	A	19940531	US 91-656755	19910219
PRAI	JP 89-231209		19890906		
AB	Polymers sol. in water, but insol. in aq. salt soln., useful in the manuf. of diapers, are prep'd. by polymn. of 10-90% (meth)acrylic acid with 10-90% CH <sub>2</sub> :CRCOOR <sub>1</sub> (R = H, Me; R <sub>1</sub> = aryl, cyclohexyl), and neutralizing 2-70% mol carboxy groups. Thus, heating acrylic acid 80, benzyl acrylate 20, acetone 150, H <sub>2</sub> O 35 and 2,2'-azobis(2-amidinopropane) dihydrochloride 0.1 g at 70.degree. for 6 h, and neutralizing with 4.6 g 48% NaOH aq. soln. gave a polymer sol. in water, but insol. in 0.9% NaCl aq. soln.				

L14 ANSWER 26 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1991:560879 CAPLUS

Searcher : Shears 308-4994

09/101341

DN 115:160879  
TI Osmotically enhanced absorbent structures for diapers and sanitary napkins  
IN Gross, James R.; Harland, Ronald S.  
PA Kimberly-Clark Corp., USA  
SO Can. Pat. Appl., 51 pp.  
CODEN: CPXXEB  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2017677	AA	19910327	CA 90-2017677	19900528
	AU 9062580	A1	19910411	AU 90-62580	19900917
	AU 628647	B2	19920917		
	JP 03205052	A2	19910906	JP 90-258757	19900927

PRAI US 89-413149 19890927

AB The title absorbent structures comprise superabsorbents contg. chambers contg. osmotic materials. Thus, an inverse suspension polymn. of 36 g acrylic acid in aq. soln. contg. NaOH, NaCl, and 12.25 g Et cellulose gave acrylic acid-Na acrylate copolymer particles with av. diam. 50 .mu.m having water absorbency 44.2, 20.0, and 30.0 g/g polymer, without load, under load for 10 min, and for 60 min, resp., and cond. 13.0 and 12.0 mmho, as soln. and as filtrate, resp.

L14 ANSWER 27 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1991:542401 CAPLUS

DN 115:142401

TI An absorbent polymer porous structure and its manufacture

IN Gross, James R.

PA Kimberly-Clark Corp., USA

SO Can. Pat. Appl., 37 pp.

CODEN: CPXXEB

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2017570	AA	19901130	CA 90-2017570	19900525
	US 5403870	A	19950404	US 93-124732	19930920

PRAI US 89-359470 19890531

US 91-662518 19910228

AB An absorbent porous polymer structure possessing improved free swell capacity is disclosed. It is manufd. by (a) forming an oil-in-water suspension, the water phase contg. .gtoreq.1 water-sol. monomer and a crosslinking agent, the oil phase contg. a volatile org. compds. having a b.p. greater than the b.p. of water; (b) polymg. the monomer to form a water-swellable, water-insol. polymer having the

Searcher : Shears 308-4994

09/101341

oil phase dispersed in it, and (c) drying the polymer at a temp. greater than the b.p. of water such that the org. compd. volatilizes to form chambers having a diam.  $\geq$  20  $\mu\text{m}$ . The polymer is at least partially dried before the org. compd. volatilizes so that the polymer possesses sufficient structural integrity to maintain the openness of the chambers. The product is useful for diapers. The free swell capacity of polymers, prep'd. using NaOH, acrylic acid, N,N'-methylenebisacrylamide, poly(vinyl alc.), and varying amts. of toluene, increased as the percent toluene increased, up to a max. toluene concn. of apprx. 25%. Varying the amt. of suspending agent (vinyl alc. polymer) also affected free swell capacity of the polym.

L14 ANSWER 28 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1991:229618 CAPLUS

DN 114:229618

TI Erythorbate as redox initiator for preparation of water-swellable polymers

IN Buchholz, Frederic L.; Graham, Andrew T.; Johnson, Thomas C.

PA Dow Chemical Co., USA

SO Eur. Pat. Appl., 5 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 409136	A2	19910123	EP 90-113602	19900716
	EP 409136	A3	19911016		
	R: BE, DE, FR, GB, IT, NL				
	CA 2021374	AA	19910119	CA 90-2021374	19900717
	JP 03143903	A2	19910619	JP 90-190352	19900718

PRAI US 89-382156 19890718

US 89-393495 19890814

AB The title polymers, useful in disposable diapers and sanitary napkins, are prep'd. by polymg. aq. monomers with crosslinking agents in the presence of redox initiators contg. 1200-2000 ppm ascorbic acid, erythorbic acid (I), or their metal salts and H<sub>2</sub>O<sub>2</sub>. Thus, stirring 1.5 g trimethylolpropane triacrylate, 200 g acrylic acid, 1 g Versenex 80, 1 g 5% poly(vinyl alc.), 433 g H<sub>2</sub>O, 155 g 50% NaOH, 0.67 mL 30% H<sub>2</sub>O<sub>2</sub>, 1 mL 10% N-50, 1.0 mL 10% Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, and 1 mL 10% I Na salt to 100% conversion, drying, and pulverizing gave a polymer with absorption of 0.9% NaCl 45.6 g/g and water-sol. polymer content 4.1%; vs. 48.7 and 5.5, resp., without I.

L14 ANSWER 29 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1991:24805 CAPLUS

DN 114:24805

Searcher : Shears 308-4994

09/101341

TI Manufacture of poly(metal acrylates)  
IN Shimada, Hidetoshi; Miyoshi, Susumu  
PA Idemitsu Petrochemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02194010	A2	19900731	JP 89-11813	19890123
AB	The title polymers, with high water absorptivity, useful for disposable diapers, sanitary products, etc., are manufd. by polymg. aq. metal acrylates in reverse-phase suspension in the presence of org. solvents, surfactants, polymn. initiators, and crosslinking agents, treating the products with water-sol. org. solvents, and filtering, or vice versa, and drying the filter cake. Thus, a mixt. of 35% aq. Na acrylate, n-hexane, sorbitan monostearate, K2S2O8, glycerin polyglycidyl ether, and PEG was treated at 60.degree. for 6 h, stirred with Me2CO, filtered, and the resulting solids were dried at 90.degree. for 15 h to give a polymer with water absorption 290 g/g and gel strength 48 g/cm <sup>2</sup> , vs. 387 and 6, resp., for the polymer prep'd. similarly without Me2CO treatment.				
IT	67-56-1, Methanol, uses and miscellaneous 67-64-1, Acetone, uses and miscellaneous				
	RL: USES (Uses) (treatment of metal acrylate polymers with, for improved water absorptivity and gel strength)				

L14 ANSWER 30 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1990:480668 CAPLUS

DN 113:80668

TI Coatings for binder fibers for manufacture of nonwoven fabrics

IN Yoneda, Akihiko; Takasuka, Takeshi; Koide, Ryuichi; Watanabe, Jun;  
Kita, Setsuo; Ota, Sumio; Ioka, Yoshiaki; Takahashi, Kazue

PA Matsumoto Yushi-Seiyaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02080672	A2	19900320	JP 88-235727	19880919
	JP 04018068	B4	19920326		
AB	The title coatings, facilitating carding of binder fibers and improving water permeation and holding of the resulting nonwoven fabrics, useful for diapers and sanitary napkins, comprise				

Searcher : Shears 308-4994

09/101341

.gtoreq.10% silicones modified with polyoxyalkylenes contg.  
.gtoreq.40% polyoxyethylene groups and having mol. wt. 1000-100,000  
and surfactants contg. C.gtoreq.28-hydrocarbyl groups as hydrophobic  
groups. Thus, polyethylene sheath-polypropylene core composite  
fibers coated with a mixt. of di-Me siloxane modified with 45%  
ethylene oxide-propylene oxide (60:40) copolymer (mol. wt. 3000),  
C30-alc.-ethylene oxide adduct, polyoxyethylene sorbitan  
monostearate, and polyoxyethylene octylphosphate K salt  
were carded with static generation .ltoreq.0.5 kV into a web and  
heated at 145.degree. to give a nonwoven fabric which showed instant  
absorption of water drops, good water holding, and good water  
resistance.

L14 ANSWER 31 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1990:461255 CAPLUS

DN 113:61255

TI Water-repellent heat-fusible composite fibers

IN Sosa, Kazuhiko; Nagi, Hisashi

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02084581	A2	19900326	JP 88-211080	19880824

AB The title fibers, useful for diaper and sanitary  
napkin facings, are prepd. by finishing the fibers  
with lubricants contg. 5-20% silicones and 80-95% mixts. of 50-70%  
alkyl phosphate salts and 30-50% nonionic lubricants, with  
finish content 0.1-2%. Thus, a polyether-polyester core-shell  
composite staple fiber was treated with lubricant contg. di-Me  
siloxane 10, cetyl K phosphate 55, polyethylene glycol oleate 10,  
and cetylstearyl alc. 25% at lubricant pickup 0.2%.  
Nonwoven of these fibers showed water repellency (JIS A 1079) 70%,  
vs. <50 for nonwoven of fibers with lubricant content 0.05%.

L14 ANSWER 32 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1990:78964 CAPLUS

DN 112:78964

TI Moisture-permeable polyolefin porous films and their manufacture

IN Shirai, Shusuke; Nakanishi, Hirofumi; Kamishioiri, Nobuyuki

PA Kao Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

Searcher : Shears 308-4994

09/101341

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01144431	A2	19890606	JP 87-304052	19871201
JP 07068394	B4	19950726		
AB	Biaxially stretched films, useful in prep. medical goods, diapers, clothes, etc., comprise polyolefins 100, fillers 50-250, and monoesters and/or polyesters prep. from polybasic acids, polyhydric alcs., and C14-22 monobasic acids and/or C12-22 monohydric alcs. 2-50 parts. Ultzex 2520FP (linear low-d. polyethylene) 100, CaCO <sub>3</sub> 150, and 1:2:4 adipic acid-trimethylolpropane-Lunac S-40 (stearic acid) reaction products 25 parts were blended, formed into a 80-.mu.m film, and stretched 1.7:1 and 1.8:1 in the machine and transverse direction, resp., to give a film having moisture permeability 2.35 g/100 cm <sup>2</sup> -h, tear strength in the machine direction 145 g/50 .mu.m, good softness, and uniform thickness, vs. 0.70, 85, hard touch, and with some unevenness, resp., for a film stretched 1.5:1 in the machine direction only.			

L14 ANSWER 33 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1989:580764 CAPLUS  
DN 111:180764  
TI Manufacture of water-absorbing films from crosslinked acrylic copolymer salts  
IN Shirai, Fumiya; Wada, Shintaro  
PA Nitto Denko Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63242344	A2	19881007	JP 87-80333	19870331
JP 2572982	B2	19970116		
AB	A water-absorbing film is prep. from crosslinked acrylic acid deriv. copolymer salts of alkali metal, ammonium, or amine. A soln. contg. acrylic acid-2-ethylhexyl acrylate-2-methoxyethyl acrylate copolymer was treated with iso-Pr alc. and an aq. KOH soln., followed by triglycidyl isocyanurate. The soln. was applied to a release-sheet and dried to give a 50 .mu.m-thick water-absorbing film.			

L14 ANSWER 34 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1988:551330 CAPLUS  
DN 109:151330  
TI Manufacture of highly hygroscopic poly(carboxylic acid) salt fibers

Searcher : Shears 308-4994

09/101341

IN Miyamatsu, Norihisa  
PA Nichibi Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63028912	A2	19880206	JP 86-166797	19860717
	JP 02002969	B4	19900122		

AB The title fibers for sanitary products and diapers are prepd. with good spinnability by dry spinning aq. solns. contg. .gtoreq.35% mixts. of poly(carboxylic acids) contg. .gtoreq.7 mequiv/g carboxy groups having 25-90% of the groups substituted as salts with alkali metals and/or monobasic amines and having wt.-av. d.p. 1000-30,000 and 0.1-10% [on poly(carboxylic acid)] polyhydric alcs. at draft ratio .gtoreq.2, and then heat treating the fibers. Thus, a liq. contg. poly(acrylic acid) (Aron A 10H; wt.-av. d.p. 5000) 3, NaOH 1.28, glycerol 0.015, and H<sub>2</sub>O 5 parts was deaired 24 h in a tank at 100.degree., spun into air at 120.degree. and draft ratio 15, wound, and heat-treated 13 s at 230.degree. to give hygroscopic fibers with good processability, water absorption 830 g/g, and artificial urine (0.27N NaCl) absorption 78 g/g.

L14 ANSWER 35 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1988:530736 CAPLUS

DN 109:130736

TI Hydrophobic synthetic fibers with low water absorption and good processability

IN Ezaki, Tamemaru; Nagisa, Hisashi

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63059478	A2	19880315	JP 87-117617	19870513
	JP 01014341	B4	19890310		

AB The title fibers, useful for diaper and sanitary napkin facings, are prepd. by finishing hydrophobic synthetic fibers with K alkyl phosphate mixts. comprising .gtoreq.70% K cetyl phosphates to give fibers with finish content 0.05-2% and water absorption area (A; integrated value of the relation l = at0.5 calcd. from 0 to 10 min; l = water absorption height in cm after stuffing 5 g fibers in a tube with inner diam. 1

Searcher : Shears 308-4994

09/101341

cm and length 20 cm and contacting the fiber end with H<sub>2</sub>O at 21 .+-.  
1.degree. and 62 .+-. 2%; a = 0-2.27; t = time in min) .ltoreq. 48.  
Thus, PET was melt spun, drawn, lubricated, crimped, cut, and coated  
with an aq. compn. contg. K cetyl phosphate (I) to I content 0.15%  
and dried to give fibers with A 31. A nonwoven of these fibers was  
laminated with a rayon inner layer to give a product with surface  
water absorption area 6.4 cm<sup>2</sup> after injection of 10 mL H<sub>2</sub>O into the  
surface, compared with 25.3 cm<sup>2</sup> using a higher alc  
. -ethylene oxide adduct instead of I.

L14 ANSWER 36 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1988:456499 CAPLUS  
DN 109:56499  
TI Water-absorbing compositions with extended shelf life facilitating  
fiber formation  
IN Bi, Le Khac  
PA ARCO, USA  
SO Eur. Pat. Appl., 12 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 264208	A2	19880420	EP 87-308729	19871001
	EP 264208	A3	19890531		
	EP 264208	B1	19940119		
	R: BE, DE, ES, FR, GB, IT, NL				
	ES 2049728	T3	19940501	ES 87-308729	19871001
	JP 63101457	A2	19880506	JP 87-250065	19871005
	US 4880868	A	19891114	US 87-136810	19871217

PRAI US 86-915455 19861006  
AB The title curable compn. comprises copolymer of 25-75 mol%  
.alpha.,.beta.-unsatd. carboxylic acid or salt and 75-25  
mol% comonomer and polypls (alkylene glycols or their ethers,  
polyhydric phenols or their hydroxyalkyl ethers, glycerol,  
erythritol, pentaerythritol, natural monosaccharides). Thus, 1270 g  
isobutylene-maleic anhydride copolymer was neutralized (53.5%) with  
NaOH, dry-spun with 3 phr propylene glycol, and cured at 210.degree.  
for 30 min to give fibers with solv. 23.9% in 0.9% NaCl and swelling  
index (1 atm.) 46.3.

L14 ANSWER 37 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1988:76514 CAPLUS  
DN 108:76514  
TI Water-absorbing compositions  
IN Ohayashi, Shigeji; Nakamura, Morio; Yamamoto, Takushi; Tanaka,  
Hitoshi; Sakamoto, Yuji  
PA Seitetsu Chemical Industry Co., Ltd., Japan  
Searcher : Shears 308-4994

09/101341

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62236860	A2	19871016	JP 86-80935	19860407
	JP 06051843	B4	19940706		

AB Absorbents useful for disposable diapers, etc., comprise absorbent, powd. resins and powders prepd. by impregnating perfumes in water-sol. resins. A mixt. of 94 parts absorbent (Aquakeep 10SH) and 6 parts perfumed gum arabic powder masked odors effectively in absorption of water.

L14 ANSWER 38 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1987:428427 CAPLUS

DN 107:28427

TI Absorbent vegetable materials for diapers and sanitary napkins

IN Goldman, Stephen Allen; Myhre, David Vernon; Retzsch, Herbert Louis

PA Procter and Gamble Co., USA

SO Brit. UK Pat. Appl., 22 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2177100	A1	19870114	GB 86-15404	19860624
	US 4737582	A	19880412	US 85-750567	19850628

PRAI US 85-750567 19850628

AB Superabsorbent materials for use in diapers and sanitary napkins are prepd. from vegetable materials, comprising 5-60% pectin, 5-60% substituents contg. cation exchange groups, 0.5-6.0 meq/g of cation exchange groups, and 20-85% non-pectin vegetable material. Never-dried sugar beet pulp is dispersed in deionized water, shredded, filtered, redispersed and treated with NaOH to pH 7.5. The pulp was filtered, redispersed, treated with EtOH and acetone, and dried to give a dry-wt. yield of 84%. The pulp contains 26.9 wt. % pectin with a 57% degree of esterification. The pulp was succinylated with succinic anhydride at 80.degree. under N to give succinylated pulp with a dry wt. increase of 36% and a cation exchange of 3.4 meq/g. The succinylated pulp was converted to the Na salt form. This material had a cation exchange capacity of 3.3 meq/g, and absorbed synthetic urine at 11.9 and 18.8 g/g for confining wts. of 1.0 and 0.1 psi, resp. This is an increase in absorbance capacity of 80 and 57%, resp., relative to untreated sugar beet pulp. Liq. sorption is very rapid with an uptake at 1 psi of >10 g/g in the

Searcher : Shears 308-4994

09/101341

first min.

L14 ANSWER 39 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1987:86483 CAPLUS  
DN 106:86483  
TI Composite materials from cellulose and/or starch as absorbent products  
IN Biez, Georges  
PA Fr.  
SO Fr. Demande, 10 pp.  
CODEN: FRXXBL  
DT Patent  
LA French  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2570621	A1	19860328	FR 84-14664	19840925
	FR 2570621	B1	19870109		

AB Composite materials based on reclaimed cellulose and/or starches are produced by mixing the cellulose and/or starch,  $\text{CaSO}_4 \cdot 0.5\text{H}_2\text{O}$ ,  $\text{CaCO}_3$ , and possibly .gtoreq.1 adjustment adjuvant for the d. in order to obtain a primary mass, grinding this to a particle size of 0.1-3 mm, incorporating  $\text{CaCl}_2$ , quicklime,  $\text{CaSO}_4$ , powd. calcite, or  $\text{CaCO}_3$  producing a secondary mass with a water content of 20-50%, thermally treating the secondary mass in a satd. steam atm. at 250-300.degree., incorporating water and a crystallizable binder, compression into a desired form, and thermally treating the product at 80-150.degree. to effect crystn. of the binder. Thus, monocalcium phosphate or  $\text{H}_3\text{PO}_4$  0.2-1.5,  $\text{CaSO}_4$  2.5-7.5, urea 0.5-2.0, and an ammonium salt or  $\text{NH}_4\text{OH}$  (40.degree. Baume) 1.0-3.0 % were dissolved in 10 L  $\text{H}_2\text{O}$  at .ltoreq.90.degree.. Ten L of .ltoreq.90.degree.  $\text{H}_2\text{O}$  was added, and borax 0.3-2.0,  $\text{NaHCO}_3$  0.3-1.5, or  $\text{NaCl}$  0.3-1.5% was added with mixing. After another 10-L addn. of .ltoreq.90.degree.  $\text{H}_2\text{O}$ , a dry gelatin ext. 1.8-3, manioc starch 2-12, or Na alginate 2-8% was added. Upon cessation of heating, 10 L of  $\text{H}_2\text{O}$  was added, followed by CM-cellulose 1.5-4.0, Me cellulose 1.0-3.0, or modified Me cellulose (Thylose) 1.5-5.0 and poly(vinyl acetate) or poly(vinyl alc.) 2-8%. After the addn. of a last 10-L charge of  $\text{H}_2\text{O}$ , an insolubilizing 1-2% melamine-formaldehyde resin or 1-2% phenolic resin was added. The binder was solidified and applied as above.

L14 ANSWER 40 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1986:562347 CAPLUS  
DN 105:162347  
TI Recording material  
IN Akitani, Takashi; Arai, Ryuichi  
PA Canon K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.

Searcher : Shears 308-4994

09/101341

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61058788	A2	19860326	JP 84-182171	19840831
	JP 06030951	B4	19940427		

AB A substrate or a layer laminated on a substrate is contained with a poly(allylamine) salt  $[CH_2CH(CH_2NH_3^+)X^-]_n$  (I, X = Cl, Br, NO<sub>3</sub>, PO<sub>4</sub>, MeCO<sub>2</sub>, PhCO<sub>2</sub>, p-toluenesulfonate; n = 5-10,000) to give a recording material. The material quickly absorbs ink to produce clear multicolored images having high resoln., high light fastness, and high H<sub>2</sub>O resistance and is useful for ink-jet recording. Thus, a paper sheet was coated to 15 g/m<sup>2</sup> with a compn. contg. a fine SiO<sub>2</sub> powder 100, poly(vinyl alc.) 50, poly(allylamine) chloride (PAA-HCl-H; wt. av. mol. wt. 60,000) 1, and H<sub>2</sub>O 500 parts to give a recording material. Recording characteristics examd. by using 4 color inks (yellow, magenta, cyan, and black) and the fastness of the colored image to H<sub>2</sub>O and light were superior to those for control materials not contg. I.

L14 ANSWER 41 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1985:496457 CAPLUS

DN 103:96457

TI Thermal recording material

PA Mitsui Toatsu Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

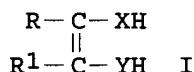
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60021294	A2	19850202	JP 83-129327	19830718
	JP 04069077	B4	19921105		

GI



AB A thermal recording material contains a compd. of the general formula I (X, Y = S, O, imino; R, R1 = alkyl, aryl, heterocyclic ring which may have substituted groups, or aryl formed by combining RR1 and may be substituted with alkyl, nitro, cyano, halo) and a Ni,

Searcher : Shears 308-4994

09/101341

Co, Pd or Pt salt or complex of an org. compd. whose stability const. is .ltoreq. that of the metal complex of I. The recording material has an absorption in IR region which is readable with a semiconductor laser. Thus, a paper support was coated with a dispersion contg. 1,2,3,4-tetrachloro-5,6-benzenedithiol, poly(vinyl alc.), 2,2'-dihydroxy-5,5'-di-tert-octyldiphenyl sulfone Ni salt, and CaCO<sub>3</sub> in H<sub>2</sub>O to give a thermal recording paper that gave a green color image having a max. absorption at 925 nm.

L14 ANSWER 42 OF 48 CAPLUS COPYRIGHT 1999 ACS  
AN 1983:549605 CAPLUS  
DN 99:149605  
TI Heat-sensitive recording material suitable for use with infrared lasers  
IN Okamoto, Tosaku; Okimoto, Tomoyuki; Ishida, Katsuhiko  
PA Kanzaki Paper Mfg. Co., Ltd., Japan  
SO Ger. Offen., 29 pp.  
CODEN: GWXXBX  
DT Patent  
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3248042	A1	19830707	DE 82-3248042	19821224
	JP 58134791	A2	19830811	JP 81-214692	19811225
	JP 01015396	B4	19890316		
	JP 58145493	A2	19830830	JP 82-27818	19820222
	JP 01015397	B4	19890316		
	JP 59007089	A2	19840114	JP 82-118090	19820705
	JP 01016679	B4	19890327		
	GB 2112160	A1	19830713	GB 82-34793	19821207
	GB 2112160	B2	19851002		
	US 4510512	A	19850409	US 82-448266	19821209
	FR 2518931	A1	19830701	FR 82-21753	19821224
	FR 2518931	B1	19860509		

PRAI JP 81-214692 19811225  
JP 82-27818 19820222  
JP 82-118090 19820705  
AB Heat-sensitive recording materials for use with IR lasers are composed of a color former, a color developer, and a light-absorbing material selected from natural or synthetic silicates and calcination products obtained through the calcination of a Zn compd. and a clay mineral at .gtoreq.500.degree.. Thus, a wood-free paper was coated at 7 g/m<sup>2</sup> (dry) with a mixt. contg. a ball-milled dispersion contg. 3-(N-ethyl-p-toluidino)-6-methyl-7-phenylaminofluoran 25, 10% aq. poly(vinyl alc.) 5 g and water (25% solids), a ball-milled dispersion contg. 4,4'-isopropylidenediphenol 100, stearamide 75, 10% aq. poly(vinyl alc.) 5 g, and water (25 % solids), and

Searcher : Shears 308-4994

09/101341

a ball-milled dispersion contg. actinolite (av. particle size of 2.6 .mu.m) 200, 10% aq. poly(vinyl alc.) 200 g, and water (25 % solids) to give a thermal recording sheet which upon exposure to a CO<sub>2</sub> laser (initial output 1 W; wavelength 10.6 .mu.m; beam diam. 100 .mu.m) required 0.42 J/cm<sup>2</sup> to give a d. of 1.0.

L14 ANSWER 43 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1982:124834 CAPLUS

DN 96:124834

TI Hydrophilic polymers

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56152806	A2	19811126	JP 80-57175	19800428
	JP 63035644	B4	19880715		

AB A polymer having OH groups is treated with a monovalent metal hydroxide to replace some or all the H in the OH groups with the metal and then esterified with a cyclic acid anhydride to introduce -CO<sub>2</sub>H groups and/or metal salts to the polymer to provide hydrophilic character. The polymer is used for paper and textile sizing agents, sanitary napkins, or diapers prodn. Thus, 100-200 mesh poly(vinyl alc.) (d.p.. 1700, degree of sapon. 99 mol %) was treated with a 18% NaOH soln. to prep. an alcoholate, which was further treated with maleic anhydride, DMSO, and toluene to prep. a paper sizing agent.

L14 ANSWER 44 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1982:7524 CAPLUS

DN 96:7524

TI Resin moldings having high water absorbing power

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56109249	A2	19810829	JP 80-11083	19800131

AB Water absorbing materials for the concn. of aq. emulsions are prep'd. from poly(vinyl alc.) maleate Na salt (I) [75026-42-5] and acrylic acid-starch graft copolymer [9086-70-8]. Thus, 50 g powd. poly(vinyl Searcher : Shears 308-4994

09/101341

alc.), 30 g maleic anhydride, 100 cm<sup>3</sup> dioxane, and 100 cm<sup>3</sup> toluene were stirred at 80.degree. for 5 h. The compn. was filtered, dispersed in 200 cm<sup>3</sup> acetone, mixed with 240 cm<sup>3</sup> methanolic 1N NaOH soln., stirred for 10 min to neutralize the CO<sub>2</sub>H groups, filtered, and dried to give 75 g powd. I having water absorbing power 25,000%. I (5 g) was mixed with 0.3 cm<sup>3</sup> MeOH, extruded, and pelletized and 1 g pellets were added to 100 cm<sup>3</sup> 20% polyurethane emulsion which was aged for 2 days and sepd. to give a 40% emulsion. When powd. I was added to the emulsion, the emulsion was solidified into scattered powder and no concn. was achieved.

L14 ANSWER 45 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1979:594372 CAPLUS

DN 91:194372

TI Material for absorbing aqueous fluids

IN Harada, Kazuto; Yoshitake, Toshihiko

PA Kuraray Co., Ltd., Japan

SO Ger. Offen., 26 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2908805	A1	19790927	DE 79-2908805	19790307
	DE 2908805	C2	19840216		
	JP 54125896	A2	19790929	JP 78-34575	19780323
	GB 2017107	A	19791003	GB 79-8870	19790313
	GB 2017107	B2	19820902		
	US 4251643	A	19810217	US 79-21169	19790316

PRAI JP 78-34575 19780323

AB An absorbent material for aq. fluids was prep'd. by reaction of poly(vinyl alc.) with a cyclic anhydride in the presence of an amine or metal salt to give partial crosslinking of the polymer. Thus, powd. poly(vinyl alc.) 50, maleic anhydride [108-31-6] 30, and NaHCO<sub>3</sub> 20.8 g were heated 4 h at 80.degree. in 100 mL dioxane and 100 mL PhMe as solvents. The mixt. was filtered, washed repeatedly with acetone, and dried to give 100 g modified poly(vinyl alc.) particles. The product had water absorption capacity 120 g/g.

L14 ANSWER 46 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1979:73225 CAPLUS

DN 90:73225

TI Cellulose fibers with a high absorption rate and a high absorption capacity

IN Reid, Albert Richard

PA Hercules Inc., USA

Searcher : Shears 308-4994

09/101341

SO Ger. Offen., 37 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2821968	A1	19781130	DE 78-2821968	19780519
	DE 2821968	C2	19920723		
	US 4128692	A	19781205	US 77-800248	19770525
	FR 2392069	A1	19781222	FR 78-10923	19780413
	FR 2392069	B1	19851025		
	CA 1104002	A1	19810630	CA 78-301681	19780421
	SE 7805494	A	19781126	SE 78-5494	19780512
	SE 439731	B	19850701		
	SE 439731	C	19851107		
	GB 1595153	A	19810812	GB 78-19540	19780515
	NL 7805485	A	19781128	NL 78-5485	19780522
	JP 53145864	A2	19781219	JP 78-62831	19780525
	JP 61003908	B4	19860205		
PRAI	US 77-800248		19770525		
	US 74-501112		19740827		

AB Cellulose fibers are coated with a water-insol., water absorbing polymer to give fibers with a high rate of absorption and high absorption capacity for water or aq. salt solns. Thus, 1 g cotton was dispersed in 400 mL water, mixed with 9 g acidified Na carboxymethylcellulose [9004-32-4], stirred in a blender for apprx.16 min, mixed with 800 mL acetone [67-64-1], and decanted to remove excess liq. The fibers were washed 3 times with 600 mL acetone, freed of solvent by decanting and pressing, and dried 1.5 h at 60.degree. in vacuo. The absorption of 1% NaCl by the coated cotton fibers was 1.5, 5.4, 8.5, 11.6, 11.7, 11.7, 11.7 mL/g for 1, 3, 5, 10, 15, 20, and 25 min intervals. The products are suitable for the prodn. of bandages, bed pads, tampons, and sanitary napkins

IT 67-56-1, uses and miscellaneous 67-63-0, uses and miscellaneous 67-64-1, uses and miscellaneous

RL: USES (Uses)

(in coating of cellulosic fibers with water-insol.  
water-swellable polymers)

L14 ANSWER 47 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1978:51683 CAPLUS

DN 88:51683

TI Powdered absorbent for liquids

IN Tsuchiya, Yoshimi; Mizutani, Hiroshi; Sakurai, Akemi

PA Kao Soap Co., Ltd., Japan

SO Ger. Offen., 13 pp.

Searcher : Shears 308-4994

09/101341

CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2649974	A1	19770512	DE 76-2649974	19761030
	JP 52059086	A2	19770516	JP 75-135435	19751111
	FR 2331603	A1	19770610	FR 76-33708	19761109
	FR 2331603	B1	19781222		
	AU 7619504	A1	19780518	AU 76-19504	19761110

PRAI JP 75-135435 19751111

AB The title powd. absorbent consists of a mixt. of a gel-forming hydrophilic polymer [e.g., poly(ethylene oxide), sodium polyacrylate [9003-04-7], cellulose [9004-34-6], poly(vinyl alc.), guar gum, alginate, or xanthan gum [11138-66-2]] and 10-200 wt.% (based on polymer wt.) of an inorg. material (particle size <50.mu.) such as silicic acid, Ca or Mg or Ba carbonate, kaolin, clay, diatomaceous earth, and Al2O3. The absorbent may also contain particles of activated carbon and/or a germicidal agent. The absorbent is used in amts. of 0.1-5 g in disposable diapers and/or sanitary napkins. Thus, a sorbent for sanitary napkins is prep'd. from cellulose flock 4, Na/Ca alginate 0.5, silicic acid 0.5, water proof paper 0.5, and nonwoven fabric 0.5 g.

L14 ANSWER 48 OF 48 CAPLUS COPYRIGHT 1999 ACS

AN 1974:478924 CAPLUS

DN 81:78924

TI Poly(vinyl alcohol) binders for sanitary napkins

IN Duchane, David V.

PA Kimberly-Clark Corp.

SO Ger. Offen., 16 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2341815	A1	19740307	DE 73-2341815	19730816
	US 3808165	A	19740430	US 72-282244	19720821
	JP 49057162	A2	19740603	JP 73-76457	19730705
	NL 7311442	A	19740225	NL 73-11442	19730820
	AU 7359395	A1	19750220	AU 73-59395	19730820
	IT 1001530	A	19760430	IT 73-28019	19730820
	CA 1012667	A1	19770621	CA 73-179194	19730820
	FR 2197056	A1	19740322	FR 73-30359	19730821
	ZA 7305716	A	19740731	ZA 73-5716	19730821
	GB 1446782	A	19760818	GB 73-39622	19730821

Searcher : Shears 308-4994

09/101341

PRAI US 72-282244 19720821

AB Aq. binders for sanitary napkins and sol. in cold water contained poly(vinyl alc.) (I) [9002-89-5] 7-10, borax [1303-96-4] .sim.0.4, an unstable org. acid (gelling inhibitor), e.g. acetoacetic acid (II) [541-50-4], 0.25-1, and a plasticizing glycol .sim.1%. Thus, a binder (pH 5) consisted of I 10.0, borax 0.4, polypropylene glycol [25322-69-4] (mol. wt. 425) 1, the II precursors MeCOCH<sub>2</sub>CO<sub>2</sub>Et Na salt 0.8 and HOAc 0.4%, and balance H<sub>2</sub>O. Sanitary napkins prep'd. from rayon (17 g/m<sup>2</sup>) and this binder corresponding to 7% (based on rayon) had bursting strength 205, 38, 3, or 0 g/cm<sup>2</sup> when dry, contg. 200% moisture, 30 sec after satn., or 60 sec after satn., resp., vs. 179, 10, 0, or 0 g/cm<sup>2</sup>, resp., for napkins prep'd. with a binder contg. unmodified I.

=> d his l15-; d 1-13 bib abs

(FILE 'BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, PROMT' ENTERED AT 15:25:44 ON 18 FEB 1999)

L15 77 S L14  
L16 75 DUP REM L15 (2 DUPLICATES REMOVED)  
L17 8 S L16 AND BATH  
L18 6 S L16 AND WASH###  
L19 1 S L18 AND (METHOD OR TECHNIQUE)  
L20 13 S L17 OR L18 OR L19

L20 ANSWER 1 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 92-238567 [29] WPIDS

DNC C92-107123

TI Prodn. of high water absorbent cellulose deriv.  
material - by swelling crosslinked cellulose deriv. with  
water to form hydrogel having specified degree of swelling and  
freeze drying.

DC A11 A96 D22 F07

PA (OJIP) OJI PAPER CO

CYC 1

PI JP 04161431 A 920604 (9229)\* 6 pp

ADT JP 04161431 A JP 90-285731 901025

PRAI JP 90-285731 901025

AN 92-238567 [29] WPIDS

AB JP04161431 A UPAB: 931006

Prodn. comprises swelling a crosslinked cellulose deriv. material with water to prepare a hydrogel having deg. of swelling of 80 to 1,500 g/g and freeze drying the hydrogel.

USE/ADVANTAGE - The material is useful as paper diapers and sanitary towels. It swells in salt water as well as in pure water and exhibits high degree of water absorption.

In an example, Na salt of CMC (30g) isopropanol, (600ml) and water (120ml) were mixed with an

Searcher : Shears 308-4994

09/101341

isopropanol soln. (18ml) contg. 50 g/l epichlorohydrin and an aq. soln. (9.7 ml) contg. 40 g/l NaOH. After the mixt. was heated under reflux at 83 deg. C for 1 hr. the reaction mixt. was filtered, and the residue was washed with methanol three times and dried to yield crosslinked CMC. After distilled water (2L) was added to the crosslinked CMC (1g) and stirred, the mixt. was stood for 48 hrs. to swell the crosslinked CMC. Then it was poured on a 150 mesh wire to remove water, thereby preparing hydrogel of the crosslinked CMC with deg. of swelling of 860 g/g. The hydrogel was freeze dried under 10 mmHg to obtain a high water absorbent material

0/0

L20 ANSWER 2 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 92-187745 [23] WPIDS  
DNC C92-085646  
TI Fibre of natural polysaccharide prepn.  
- involves wet spinning where polysaccharide and poly hydric alcohol are extruded into coagulation bath.  
DC A11 A32 B07 D13 D17 D22 F01  
PA (MITR) MITSUBISHI RAYON CO LTD  
CYC 1  
PI JP 04119121 A 920420 (9223)\* 4 pp  
JP 2832315 B2 981209 (9903)B 3 pp  
ADT JP 04119121 A JP 90-234425 900906; JP 2832315 B2 JP 90-234425 900906  
FDT JP 2832315 B2 Previous Publ. JP 04119121  
PRAI JP 90-234425 900906  
AN 92-187745 [23] WPIDS  
AB JP04119121 A UPAB: 931006

Fibre is prep'd. by wet-spinning in which an aq. soln. contg. natural polysaccharide and polyhydric alcohol is extruded from a spinneret into a coagulation bath contg. polyhydric alcohol.

Pref. as for the natural polysaccharide, alginic acid, its salts, agar, pectin, etc. are used. As for the polyhydric alcohol, ethylene glycol, polyethylene glycol, glycerine, etc. are used.

USE/ADVANTAGE - Natural polysaccharide is edible, water-absorbent and water-soluble. The fibre is expected to be used as medical materials, clothing or materials for food industry. As a polysaccharide fibre, chitin fibre and alginic acid salt fibre have been known, but they do not have good enough elongation for further processing into fibre prods.. The technology in which the use of polyhydric alcohol in coagulation bath is new solves the problem as fibres with elongation of 20-30% are obtd..

0/0

L20 ANSWER 3 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
Searcher : Shears 308-4994

09/101341

AN 90-119136 [16] WPIDS  
DNC C90-052389  
TI Polyvinyl alcohol-type binder fibre - produced by wet spinning, using aq. soln. contg. high concn. of salts as coagulation bath etc..  
DC A14 A32 F01  
PA (KURS) KURARAY CO LTD  
CYC 1  
PI JP 02068396 A 900307 (9016)\* 4 pp  
JP 2833761 B2 981209 (9903) 4 pp  
ADT JP 02068396 A JP 88-220997 880902; JP 2833761 B2 JP 88-220997 880902  
FDT JP 2833761 B2 Previous Publ. JP 02068396  
PRAI JP 88-220997 880902  
AN 90-119136 [16] WPIDS  
AB JP02068396 A UPAB: 930928  
PVA-type binder fibre has water-dissolving temp. of 50-90 deg C and latent water-dissolving temp. of 10-40 deg C. The degree of saponification of the PVA is 90.0 to 97.5 mol%.

Prodn. of the PVA-type binder fibre comprises spinning an aq. soln. of (A) PVA with degree of saponification of 90.0 to 97.5 mol% into filaments by wet spinning using an aq. soln. contg. high concn. of salts as a coagulating bath, wet stretching them, opt. drying them, and subjecting them to dry hot drawing and/or constant length heat treatment in such manner that the obtd. fibre has water-dissolving temp. of 50-90 deg C.

USE/ADVANTAGE - The binder fibre is used for producing disposable wipers and sanitary napkins. These goods have high paper strength and are easily dispersed in water when thrown into lavatories. The degree. of polymerisation of (A) is (e.g. 1,000-4,000). water-dissolving temp., of the binder fibre obtd. after dyring and heating in its prodn. water-dissolving temp. of the binder fibre obtd. after drying and before heating in its prodn.

0/0

L20 ANSWER 4 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 87-009483 [02] WPIDS  
DNC C87-003594  
TI Absorbent vegetable prods. contg. pectin - obtd. by introducing cation exchange gps. into vegetable material such as sugar beet pulp.  
DC A96 D22 F07 P32  
IN GOLDMAN, S A; MYHRE, D V; RETZSCH, H L  
PA (PROC) PROCTER & GAMBLE CO  
CYC 2  
PI GB 2177100 A 870114 (8702)\*  
US 4737582 A 880412 (8817) 17 pp  
ADT GB 2177100 A GB 86-15404 860624; US 4737582 A US 85-750567 850628  
PRAI US 85-750567 850628

Searcher : Shears 308-4994

09/101341

AN 87-009483 [02] WPIDS

AB GB 2177100 A UPAB: 930922

A vegetable material comprising (1) 5-60% pectin, (2) 5-60% substituents contg. cation exchange gps. which have been incorporated into the vegetable material; (3) 0.5-6.0 meq/g of cation exchange gps. and (4) 20-85% non-pectin vegetable material.

Pref. the non-pectin material comprises (1) 80-100% cellulose, hemicellulose, lignin and mixts. of these, (2) 0-5% CHCl<sub>3</sub>-soluble lipids and (3) 0-15% non-lipid organic materials extractable in a mixt. of CHCHCl<sub>3</sub>, methanol and water in a vol. ratio of 20:4:1. The vegetable material is derived e.g. from sugar beet pulp, citrus pulp, apple pulp, apricot pulp, watermelon rinds or combinations of these. The substituents contg. cation exchange gps. are pref. polyprotic acids, esp. organic dicarboxylic acids and partic. succinic acids or maleic acids; or the polyprotic acids are phosphates. The vegetable material may be in its acid form or in salt form, e.g. as Na or K salt. The cation exchange substituents are introduced e.g. by reacting the vegetable material with organic dicarboxylic acid anhydrides, organic dicarboxylic acid halides, phosphorus oxychloride or polyphosphoric acid in a solvent chosen from pyridine, acetone with trialkylamine catalyst, DMF with trialkylamine catalyst or acetonitrile with trialkylamine catalyst. The trialkylamine catalyst is esp. triethylamine or tributylamine.

The cation exchange capacity of the material may be increased by soaking the vegetable material in dil. HCl soln., soaking in 1M aq. NaCl soln. at neutral pH, washing the material with ca. 1M aq. NaCl soln., and subjecting the material to an alkaline treatment at pH 8-11 to reduce the degree of esterification of the pectin.

USE/ADVANTAGE - The materials are derived from pectin-contg. agricultural by-prods. and are thus relatively inexpensive. They are absorbent in nature and are esp. useful as a replacement for the more expensive wood pulp fibres in the prodn. of disposable absorbent prods. such as disposable diapers and sani

ABEQ US 4737582 A UPAB: 930922

Novel vegetable material is derived from a pectin-contg. starting material comprising sugar beet pulp, citrus pulp, apple pulp, apricot pulp and/or watermelon rinds.

Material comprises (a) 5-60% pectin; (b) 5-60% of substs. contg. cation exchange gps. incorporated into the starting material without sepn. or separate addn. of pectin; (c) 0.5-6 meq. per g. of cation exchange gps.; and (d) 20-85% of non-pectin vegetable material. Pref. (d) comprises (i) 80-100% of cellulose, hemicellulose and/or lignin; (ii) 0-5% chloroform-soluble lipids; and (iii) 0-15% of non-lipid organic materials extractable in a mixt. of chloroform:methanol:water vol. ratio of 20:4:1.

USE - In disposable absorbent products e.g.

Searcher : Shears 308-4994

09/101341

diapers or sanitary napkins.

L20 ANSWER 5 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 85-070345 [12] WPIDS  
DNC C85-030421  
TI Absorbent material made from pectin-contg. vegetable matter - for use in disposable absorbent products.  
DC D22 F07 P21 P32 P34  
IN RICH, F T  
PA (PROC) PROCTER & GAMBLE CO  
CYC 16  
PI GB 2145103 A 850320 (8512)\* 19 pp  
EP 137611 A 850417 (8516) EN  
R: AT BE CH DE FR IT LI LU NL SE  
FI 8403156 A 850212 (8523)  
JP 60104570 A 850608 (8529)  
ES 8602040 A 860301 (8619)  
GB 2145103 B 870429 (8717)  
CA 1240813 A 880823 (8838)  
US 4783239 A 881108 (8847)  
US 4875974 A 891024 (9001)  
ADT GB 2145103 A GB 84-19908 840803; EP 137611 A EP 84-305279 840803; JP 60104570 A JP 84-166664 840810; ES 8602040 A ES 84-535064 840810; US 4783239 A US 85-717218 850328; US 4875974 A US 88-146059 880120  
PRAI US 83-522873 830811; US 85-717218 850328; US 88-146059 880120  
AN 85-070345 [12] WPIDS  
AB GB 2145103 A UPAB: 930925  
A vegetable-derived absorbent material comprises 15-60% pectin having esterification degree of 1-45%, less than 50% being in the form of divalent salt; 15-80% of cellulose, hemicellulose, and/or lignin; 0-1% chloroform-soluble lipids; 0-10% non-lipid organic material extractable in a chloroform/methanol /water mixture of volume ratio 20/4/1; 0-60% water-soluble metal salts.

An absorbent material is prep'd. from a pectin-contg. vegetable material by (a) comminuting the material to particle size 0.05-3 mm; (b) de-esterifying the pectin to a degree of esterification less than 45%; (c) washing the material in soft water; and (d) drying to a moisture content less than 15%.

USE/ADVANTAGE - Material is for use in disposable absorbent products. Wood pulp has been used for such products , e.g. diapers and sanitary towels. Present process uses inexpensive and more readily renewable agricultural byproducts, e.g. citrus, sugar beet or apple residues.

0/0

ABEQ GB 2145103 B UPAB: 930925

An absorbent medium derived solely from an agricultural by-product and consisting of (a) from 15% to 60% pectin, said pectin having a Searcher : Shears 308-4994

09/101341

degree of esterification of from 1% to 45%, and less than 50% of the pectin being in the form of a divalent metal salt; (b) from 15% to 80% of a medium selected from cellulose, hemicellulose, lignin and mixtures thereof; (c) from 0% to 1% chloroform soluble lipids; (d) from 0% to 10% non-lipid organic materials extractable in a mixture of chloroform, methanol and water, said mixture having a volume ratio chloroform:methanol:water of 20:4:1; and (e) from 0% to 6% water-soluble metal salts.

ABEQ US 4783239 A UPAB: 930925

Novel absorbent material is prep'd.

from a vegetable material contg. 15% or more pectin, by (a) comminuting material to particle size 0.05-3 mm.; (b) de-esterifying pectin to deg. of esterification less than 45% using alkali in soft water at pH 9-12, (c) washing material in soft water, (d) washing material with an organic solvent, and (e) drying to less than 15% moisture content.

Opt. process further comprises a bleaching step between (b) and (c), using H<sub>2</sub>O<sub>2</sub>, ClO<sub>2</sub>, Cl<sub>2</sub>, perborate and/or hypochlorite as bleaching agent.

ADVANTAGE - Low cost vegetable materials e.g. citrus peel, sugar beet pulp, and/or applies are used as starting materials.

ABEQ US 4875974 A UPAB: 930925

Absorbent material is derived from a vegetable material contg. 15% or more pectin.

Prod. comprises (a) 15-60% pectin having deg. of esterification of 1-45% of which 18.5-50% comprises its divalent metal salt; (b) 15-90% of cellulose hemicellulose and/or lignin; (c) 0-1% of chloroform-soluble lipids; (d) 0-10% non-lipid organic materials extractable in a mixt. of chloroform, methanol and water in vol. ratio 20:4:1; and (e) 0-6% water-soluble metal salts.

USE - In disposable diapers, sanitary napkins, etc., prep'd. using inexpensive renewable resources.

L20 ANSWER 6 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 83-779868 [40] WPIDS

DNC C83-095761

TI Textile goods processing material - prep'd. by impregnating absorbent material with cationic softening agent and fatty acid amide.

DC A87 E16 F06

PA (LIOY) LION CORP

CYC 1

PI JP 58144175 A 830827 (8340)\* 5 pp

PRAI JP 82-27731 820223

AN 83-779868 [40] WPIDS

AB JP58144175 A UPAB: 930925

Processing material is prep'd. by impregnating

Searcher : Shears 308-4994

09/101341

**absorbent material** with (A) cationic textile softening agent and (B) fatty acid amide of formula (I) in such amt. that they may fill 1-50% of void vol. of the base material. In (I) R<sub>1</sub> is 7-15C alkyl or alkenyl; n is 0-2; m is 1-20.

Pref. (A) and (B) are contained in the ratio of 95:5 to 40:60 by wt. Pref. (A) is quat. ammonium salt having two 10-20C alkyl or alkenyl gps. per molecule. The absorbent base material is esp. a flexible sheet of paper, (non)woven fabrics or sponge. Pref. materials are open cellular polyurethane foam sheet with apparent specific gravity of 0.01-0.03 and thickness of 1-5mm and nonwoven fabric mfd. from cellulose, rayon or polyester fibre treated with binder or contg. polyolefin resin and having density of 10-50 g/m<sup>2</sup> a void vol. of 70-90%.

(A) are e.g. dilauryl dimethyl ammonium chloride, dipalmityl methyl hydroxyethyl ammonium ethyl sulphate and 2-heptadecyl-1-ethyl-1-(2-octadenoylethyl) imidazolinium. (B) are e.g. lauroylmono (di)ethanol amide and lauroyl (myristiloyl, palmitoyl) diethanol amide.

Processing material imparts good flexibility and antistatic property to textile goods such as clothes in both rinsing and drying processes in a washing operation.

0/0

L20 ANSWER 7 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 81-85660D [47] WPIDS

TI Aluminium salt of hydrolysed starch graft copolymer - with amide and carboxylate gps., prepn. and use as water permeable casing for water absorbent article.

DC A11 A96 D22 P34

IN ELMQUIST, L F

PA (HENK) HENKEL CORP

CYC 13

PI EP 39542 A 811111 (8147)\* EN 15 pp

R: AT BE CH DE FR GB IT LI NL SE

US 4302369 A 811124 (8150)

JP 56157415 A 811204 (8203)

BR 8102012 A 821109 (8250)

PRAI US 80-138466 800408

AN 81-85660D [47] WPIDS

AB EP 39542 A UPAB: 930915

Al salts (I) of hydrolysed starch graft copolymer (II) have amide and carboxylate functional gps. (I) are produced by treating (II) with an Al source (III) during or after hydrolysis.

Pref. (III) is Al(OH)<sub>3</sub>. 5-95 (10-75) wt.% of the free COOH gps. are neutralised with Al and the excess (III) is washed from (I) with an alcohol. Treatment is carried out so that the linkage density is higher on the surface than in the interior of the particles.

(I) are specified for use as (partially) water permeable casing  
Searcher : Shears 308-4994

09/101341

for water absorbent articles. They have excellent wicking and absorbency characteristics, making them suitable for bandages, tampons, diapers, etc.

In an example, an aq. dispersion of a graft copolymer of starch with 55% acrylonitrile was hydrolysed with excess alkali and dispersed in an equal amt. of water. 33 pts. (dry) of the prod. were reacted with 8.25 pts. basic Al acetate, then the prod. was sepd., purified, dried and passed through a 30 mesh screen. The absorbency for deionised water was 369 g/g., whilst the wicking time for a 0.1 g. sample to wet out fully when dropped onto wet filter paper floating on deionised water was 30 s.

L20 ANSWER 8 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 79-05954B [03] WPIDS  
TI Low temp. curing compsn. for forming water-absorbent articles - comprises water and/or alcohol, carboxylic polyelectrolyte, and polyamido-poly amine epichlorohydrin adduct as crosslinking agent.  
DC A94 D22  
IN BURKHOLDER, N D  
PA (DOWC) DOW CHEM CO  
CYC 1  
PI US 4132695 A 790102 (7903)\*  
PRAI US 75-565880 750407; US 77-792163 770429  
AN 79-05954B [03] WPIDS  
AB US 4132695 A UPAB: 930901  
Compsn., comprises a soln. of (1) water and/or a lower alcohol, (2) 5-60 wt. %, based on (1), of a carboxylic polyelectrolyte and (3) 0.5-5.0 wt. %, based on (2), of a water-soluble polyamido-polyamine/epichlorohydrin adduct which is sufficient to cure the polyelectrolyte.

The compsn. can be used to make films, absorbent articles, particulates, fibres, etc., such as prods being useful as surgical sponges, catamenial tampons, diapers, meat trays, paper towels, disposable door mats, disposable bath mats, and disposable litter mats for household pets. The use of component (3) as crosslinking agent gives faster in-situ cures, at lower temps.

L20 ANSWER 9 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 77-90542Y [51] WPIDS  
TI Crosslinked polyelectrolyte film with high rate of absorption - is made by casting from a foamed soln. of e.g. a (meth)acrylic acid (co)polymer and a crosslinking agent.  
DC A84 A91 A96 D22 P21 P28 P32 P73  
PA (DOWC) DOW CHEM CO  
CYC 6  
PI DE 2725736 A 771215 (7751)\*  
SE 7706634 A 780109 (7804)

Searcher : Shears 308-4994

09/101341

JP 52150463 A 771214 (7805)  
FR 2354184 A 780210 (7812)  
GB 1589431 A 810513 (8120)  
CA 1104782 A 810714 (8137)  
JP 61040693 B 860910 (8640)

PRAI US 76-693260 760607; US 77-809501 770623

AN 77-90542Y [51] WPIDS

AB DE 2725736 A UPAB: 930901

Water swellable films of lightly crosslinked polyelectrolytes have a density of 0.3-1.1g./cm<sup>3</sup> and a water absorption rate of is not > 60 secs. The films are made e.g., by (1) dissolving the polyelectrolyte and the crosslinking agent in water and/or a low alcohol; (2) mechanically aerating the polyelectrolyte soln.; (3) casting a wet film of the soln. onto a non-porous carrier and (4) heating the film at 30-175 degrees C, e.g., by blowing hot air at 100-200 degrees C onto it, to crosslink the polymer and to remove virtually all the solvent.

The films have high absorptive power coupled with rapid absorption for aq. liqs. They may e.g., be used laminated to paper, (non)woven fabrics, etc., in the prodn. of disposable towels, sanitary towels, diapers, disposable bath mats and door mats, domestic animal litterS, etc.

L20 ANSWER 10 OF 13 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 77-29052Y [16] WPIDS

TI Absorbent articles prepN. e.g.

surgical sponges and tampons - by coating a substrate with a carboxylic polyelectrolyte and crosslinking in situ.

DC A96 D22 F07 P42

PA (DOWC) DOW CHEM CO

CYC 1

PI US 4017653 A 770412 (7716)\*

PRAI US 73-371909 730620; US 74-468794 740509; US 75-573661 750501

AN 77-29052Y [16] WPIDS

AB US 4017653 A UPAB: 930901

Process comprises (A) applying a soln. of 5-60 (15-40) wt % carboxylic, synthetic polyelectrolyte in water and/or lowe alcohol and >=0.1 (0.1-10) wt. % (based on polyelectrolyte) of a crosslinking agent to a relatively thin article and (B) heating the coated article to >=30 degrees C to effect crosslinking.

The articles are used to absorb aqs. solns. e.g. for surgical sponges, catamenial tampons, diapers, meat trays, paper towels, disposable door mats/bath mats and disposable household pets' litter mats.

Suitable electrolytes include poly(Na acrylate) poly (isobutylene-diNa maleate) and a terpolymer of ethyl acrylate, Na acrylate and Na methacrylate (contg. > 50 mol. % ethyl acrylate).

Searcher : Shears 308-4994

09/101341

The crosslinking agent is selected from polyhaloalkanols, sulphonium switherions, haloepoxyanes and polyglycidyl ethers. Crosslinking is pref. effected at 90-150 degrees C.

L20 ANSWER 11 OF 13 PROMT COPYRIGHT 1999 IAC

AN 1999:77598 PROMT  
TI Amino acid derivatives im  
AU Lower, Edgar  
SO Manufacturing Chemist, (June 1997) pp. 32.  
ISSN: 0262-4230.  
PB Miller Freeman UK Ltd.  
DT Newsletter  
LA English  
WC 2535  
\*FULL TEXT IS AVAILABLE IN THE ALL FORMAT\*  
AB Peptide and protein derivatives have a number of properties that can enhance cosmetic compositions, as Edgar Lower discovered  
THIS IS THE FULL TEXT: COPYRIGHT 1997 Miller Freeman plc. (UK)

L20 ANSWER 12 OF 13 PROMT COPYRIGHT 1999 IAC

AN 1999:68088 PROMT  
TI Manufacturers Alphabetic Listings. (Directory)  
SO Air Conditioning, Heating & Refrigeration News, (4 Jan 1999) Vol. 206, No. 1, pp. 38(1).  
ISSN: 0002-2276.  
PB Business News Publishing Company  
DT Newsletter  
LA English  
WC 84481  
\*FULL TEXT IS AVAILABLE IN THE ALL FORMAT\*  
AB A  
THIS IS THE FULL TEXT: COPYRIGHT 1999 Business News Publishing Company

L20 ANSWER 13 OF 13 PROMT COPYRIGHT 1999 IAC

AN 97:379735 PROMT  
TI Amino acid derivatives im  
AU Lower, Edgar  
SO Manufacturing Chemist, (Jun 1997) pp. 32.  
ISSN: 0262-4230.  
LA English  
WC 2535  
\*FULL TEXT IS AVAILABLE IN THE ALL FORMAT\*  
AB The versatility of proteins is impressive. Some have substantivity to hair and film-forming properties, while acylated proteins can exhibit high foaming in both soft and hard water, and can decrease  
Searcher : Shears 308-4994

09/101341

skin irritation potential by reducing the effects of surfactants. Hydrolysed proteins of a cationic character can act as the sole active ingredient in cream rinses and so on. Some polypeptides can serve as tissue regenerators. Amino acids can penetrate through the hair cuticle into the hair shaft, drawing in moisture. Some hydrolysed proteins can also protect and restore human hair from damage during permanent wave processing or bleaching, and others can promote glossiness and fine feel, strengthen hair and mend split ends and add body and shine.

Hydrolysed collagen proteins have substantivity to hair and film-forming properties, varying according to their molecular weight. Improved film-forming properties, giving extra body to hair and improving manageability, arise from material of high molecular weight, better water retention and high substantivity characteristics resulting from the use of lower molecular weight material. The product also protects and restores damaged hair and softens hard hair. Incorporation of the hydrolysed protein can reduce denaturisation of hair from the use of sulphonates and sulphate surfactants. The protein exhibits strong ware retaining properties and impart a soft feel to skin and hair.

Acylated collagen proteins can be prepared from coco fatty acids, lauric acid, undecylenic acid, isostearic acid and resin acids (anionic protein-based surface active agents), neutralised with, for example, potassium, sodium or triethanolamine. Such products exhibit high foaming in both soft and hard water. and can improve foam stability, at the same time decreasing skin irritation potential by reducing the excessive effects of surfactants. The undecylenic material exhibits antibacterial and antimildew effects, and antidandruff plus antiirritant action. The isostearate derivative promotes hair and skin softness and retains gloss, giving very good hair conditioning and antistatic properties.

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=> d his 121-; d 1-2 bib abs; fil hom

(FILE 'CAPLUS, BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, PROMT' ENTERED AT 15:59:44 ON 18 FEB 1999)

Author(s)

L21 132 S MALMGREN K?/AU  
L22 8 S WIDBERG B?/AU  
L23 2 S L21 AND L22  
L24 3 S (L21 OR L22) AND L10  
L25 3 S L23 OR L24  
L26 2 DUP REM L25 (1 DUPLICATE REMOVED)

L26 ANSWER 1 OF 2 CAPLUS COPYRIGHT 1999 ACS DUPLICATE 1  
AN 1997:552656 CAPLUS  
DN 127:163061

Searcher : Shears 308-4994

09/101341

TI Manufacture of polysaccharide fibers  
as absorbent materials and  
polysaccharide fibers and absorbent  
articles therefrom

IN Malmgren, Kent; Widberg, Bengt

PA SCA Molnlycke Ab, Swed.; Malmgren, Kent; Widberg, Bengt

SO PCT Int. Appl., 29 pp.

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DT Patent

LA English

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9725463	A1	19970717	WO 96-SE1698	19961218
	W:	AU, CZ, JP, KR, MX, PL, RU, SK, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
	SE 9600087	A	19970711	SE 96-87	19960110
	SE 505873	C2	19971020		
	AU 9713233	A1	19970801	AU 97-13233	19961218
PRAI	SE 96-87		19960110		
	WO 96-SE1698		19961218		
AB	The fibers are prep'd. by spinning solns. contg. polysaccharides in a bath contg. water-miscible org. solvents and crosslinking agents. The fibers are useful for diapers and sanitary napkins (no data). A soln. contg. CM-cellulose was spun into a bath contg. 95 vol% EtOH, 5 vol.% H <sub>2</sub> O, and 3 g/L AlCl <sub>3</sub> . 6H <sub>2</sub> O, drawn in the bath, and washed with EtOH to give fibers exhibiting total synthetic urine absorption amt. 29.9 g/g by a specified test.				

L26 ANSWER 2 OF 2 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 91-178141 [24] WPIDS

DNC C91-076951

TI Hydrolysis of resin in pulp - using enzyme present during peroxy bleaching.

DC D16 D22 F09 P32

IN MALMGREN, K; SAABY-PEDERSEN, L; SKJOLD-JORGENSEN, S;  
PEDERSEN, L; SKJOLD-JOERGENSEN, S; PEDERSEN, L S; SKJOLDJOER, S  
PA (NOVO) NOVO-NORDISK AS; (SCAD) SCA GRAPHIC PAPER AB; (SCAD) SCA  
WIFSTA OESTRAND AB; (SCAD) SCA WIFSTA OSTRAND AB; (SCAD) SCA PULP  
AB; (SCAD) SCA WIFSTA-OSTRAND AB

CYC 36

PI WO 9107542 A 910530 (9124)\* 48 pp

RW: AT BE CH DE DK ES FR GB GR IT LU NL OA SE  
W: AU BB BG BR CA FI HU JP KP KR LK MC MG MW NO RO SD SU US

SE 9000077 A 910711 (9135)

AU 9067326 A 910613 (9137)

FI 9202076 A 920507 (9232)

EP 499618 A1 920826 (9235) EN 48 pp

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09/101341

R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE  
NO 9201817 A 920707 (9241)  
NZ 235983 A 930127 (9310)  
JP 05501431 W 930318 (9316) 16 pp  
EP 618326 A1 941005 (9438) EN 27 pp  
R: AT CH DE DK ES FR GB IT LI NL SE  
EP 499618 B1 941019 (9440) EN 12 pp  
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE  
US 5356517 A 941018 (9441) 19 pp  
DE 69013518 E 941124 (9501)  
ES 2064772 T3 950201 (9511)  
NO 178038 B 951002 (9545)  
SE 503797 C2 960909 (9642)  
EP 618326 B1 980211 (9811) EN 28 pp  
R: AT CH DE DK ES FR GB IT LI NL SE  
DE 69032048 E 980319 (9817)  
CZ 9005507 A3 981014 (9847)  
ES 2118310 T3 980916 (9848)

ADT FI 9202076 A WO 90-DK282 901107, FI 92-2076 920507; EP 499618 A1 EP  
90-917186 901107, WO 90-DK282 901107; NO 9201817 A WO 90-DK282  
901107, NO 92-1817 920507; NZ 235983 A NZ 90-235983 901106; JP  
05501431 W JP 90-515738 901107, WO 90-DK282 901107; EP 618326 A1  
Related to EP 90-917186 901107, EP 94-200814 901107; EP 499618 B1 EP  
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901107, US 92-848973 920416; DE 69013518 E DE 90-613518 901107, EP  
90-917186 901107, WO 90-DK282 901107; ES 2064772 T3 EP 90-917186  
901107; NO 178038 B WO 90-DK282 901107, NO 92-1817 920507; SE 503797  
C2 SE 90-77 900110; EP 618326 B1 Div ex EP 90-917186 901107, EP  
94-200814 901107; DE 69032048 E DE 90-632048 901107, EP 94-200814  
901107; CZ 9005507 A3 CS 90-5507 901108; ES 2118310 T3 EP 94-200814  
901107

FDT EP 499618 A1 Based on WO 9107542; JP 05501431 W Based on WO 9107542;  
EP 499618 B1 Based on WO 9107542; US 5356517 A Based on WO 9107542;  
DE 69013518 E Based on EP 499618, Based on WO 9107542; ES 2064772 T3  
Based on EP 499618; NO 178038 B Previous Publ. NO 9201817; EP 618326  
B1 Div ex EP 499618; DE 69032048 E Based on EP 618326; ES 2118310 T3  
Based on EP 618326

PRAI DK 89-5561 891108; SE 90-77 900110

AN 91-178141 [24] WPIDS

AB WO 9107542 A UPAB: 930928

Resin in pulp is hydrolysed with an enzyme (I) simultaneously with  
peroxy bleaching of the pulp.

Pref. process is at 45-65 deg.C/pH 8-11.5 for 0.5-5 hr., with  
dry solids content 5-30% esp. 10-20% by wt., and peroxy bleach  
concn. 0.1-5% by wt. (as H<sub>2</sub>O<sub>2</sub> in % of pulp dry solids). (I) is pref.  
a microbial lipase from Candida, Pseudomonas, Humicola,  
Chromobacterium, or Aspergillus spp, with lipase activity 0.5-50  
KLU/kg-pulp dry solids, and cellulase activity below 1000 EGU/kg.  
The prod. is pref. drained and rinsed at pH above 7. In the prodn.

Searcher : Shears 308-4994

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of fluff-pulp, the enzyme treatment may also be effected as a separate stage before or after the actual pulping operation.

USE/ADVANTAGE - The controllable process is rapid (less than 1 calendar day), does not reduce yield or brightness of the prod. but does significantly reduce fat levels, and has low handling costs. In addn., normal bleaching conditions do not need to be changed. The prod. is a chemithermomechanical fluff-pulp of improved absorbency useful in the prepn. of soft paper, tissue paper, and disposable diapers, etc.

0/8

ABEQ EP 499618 B UPAB: 941128

A process for hydrolysis of resin in pulp, characterised by carrying out enzymatic hydrolysis of resin in the presence of an enzyme with lipase and/or esterase activity simultaneously with peroxy bleaching of the pulp.

Dwg. 0/4

ABEQ US 5356517 A UPAB: 941206

Resin is hydrolysed during bleaching of pulp by simultaneously hydrolysing with lipase and esterase and bleaching using a peroxide.

Pulp has dry substance content of 5-30 wt.%. Enzyme is a lipase obtd. from a Candida, Pseudomonas, Humicoto, Chromobacterium or Aspergillus strain, and has activity of 0.5-5.0 KLU per kg of dry matter.

ADVANTAGE - Marginal losses of brightness and yield are incurred, with low handling cost.

Dwg. 0/8

ABEQ EP 618326 B UPAB: 980316

Resin in pulp is hydrolysed with an enzyme (I) simultaneously with peroxy bleaching of the pulp.

Pref. process is at 45-65 deg.C/pH 8-11.5 for 0.5-5 hr., with dry solids content 5-30% esp. 10-20% by wt., and peroxy bleach concn. 0.1-5% by wt. (as H<sub>2</sub>O<sub>2</sub> in % of pulp dry solids). (I) is pref. a microbial lipase from Candida, Pseudomonas, Humicola, Chromobacterium, or Aspergillus spp, with lipase activity 0.5-50 KLU/kg-pulp dry solids, and cellulase activity below 1000 EGU/kg. The prod. is pref. drained and rinsed at pH above 7. In the prodn. of fluff-pulp, the enzyme treatment may also be effected as a separate stage before or after the actual pulping operation.

USE/ADVANTAGE - The controllable process is rapid (less than 1 calendar day), does not reduce yield or brightness of the prod. but does significantly reduce fat levels, and has low handling costs. In addn., normal bleaching conditions do not need to be changed. The prod. is a chemithermomechanical fluff-pulp of improved absorbency useful in the prepn. of soft paper, tissue paper, and disposable diapers, etc.

Dwg. 0/8